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S U R G E R Y

Symposium on Caesarean Section and Uterine Prolapse*

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Dr. Counsellor: (Opening discussion)

We have divided this subject into three parts. Each one of us will spend approximately 5 minutes in discussing each part and then we will have about 30 minutes for questions and answers. The success of this programme will depend in great part upon your interest, because it is devised for you and we will direct it and answer any questions that you care to submit. In the present discussion will be Drs. Black, Abbott and Hunt. Dr. Hunt is the head of our Obstetrical Division at the Mayo Clinic and has most to do with Obstetrics and Caesarean Section there. I thought it would be of interest to have him represent us in this field. We submit three topics for discussion on Caesarean Section, namely—Indications and Contra-indications, types of Caesarean Section and Caesarean Section Statistics. The first speaker will be Dr. Abbott.

Dr. W. F. Abbott:

Mr. Chairman, Ladies and Gentlemen:

I propose to give the indications and contra-indications for Caesarean Section. I will divide the indications into two groups, one of which is straight cut and not at all difficult while the second is more problematic and questionable.

Group A—Absolute indications with no governing factors and a section is indicated whether the baby is living or dead.

1. Marked Pelvic Contraction—either of the pelvic inlet or outlet. I would consider a conjugate Vera of 7-8 cm or a Bi-ischial diameter of 6 cm or less. A contracted outlet, to be practicable, means you must have a large posterior segment in the pelvis and an excellent pre-requisite for vaginal delivery is a total of 15 cm or more in the Bi-ischial and Posterior Sagittal measurements combined. A trial at labor is permissible with a contracted inlet. No such course is advisable in outlet contraction and once labor has actually started the "die is cast."

2. Gigantism of the Child—This must be relative to the particular pelvis involved. Naturally, a woman with a huge pelvis can deliver a very large child.

3. Obstructing Tumors—in the pelvic lower uterine segment. These will obstruct the descent of the presenting part. Here we might mention cervical fibroids, impacted ovarian growths or an ectopic kidney. I would also like to include Carcinoma of the Cervix in this group.

Group B—Relative Indications.

Here it is a question of which is advisable, a Caesarean Section or to attempt a vaginal delivery. The type of Section advisable must also be decided upon.

General Remarks:

Caesarean Section is a much abused procedure and mostly on account of unsound indications. A "flare" for the dramatic still exists and there is a tendency to solve all obstetrical problems with a Supra-pubic incision. Unfortunately, the classical operation is technically not difficult but knowing when to operate and what type of procedure to adopt is difficult. The newer techniques and the advent of anti-biotics have made Caesarean Section much safer but unfortunately, has increased the percentage of operations unduly. An incidence of 2% submitted to abdominal section is a good record but if you get above 3% a re-evaluation of indications is strongly advised.

There are no absolute rules in relative cases and each one demands considered judgment in relation to:

- (a) The size of the maternal pelvis; a unit in every case.
- (b) The size of this particular foetus; a unit in every case.
- (c) Physical condition of the mother.
- (d) Physical condition of the baby.
- (e) Length of time in labor.
- (f) Length of time since the membranes have ruptured.
- (g) Foetal maturity and mal-formations.

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(h) Condition of the cervix as to dilatation and dilatability.

(i) Presence of obvious or probable infection.

After careful consideration of the above points the following relative indications may be listed:

1. Definite disproportion between the presenting part and the pelvic inlet. Two factors are present, a head and a pelvic inlet and the foetal head is the best pelvimeter ever devised. Clinical examination and evaluation is essential; X-ray pelvimetry is very accurate and valuable but you cannot measure natures moulding of the presenting part. A test of labor is usually advisable and, under supervision, does no harm. A floating head after 12 hours good labor is significant. Always remember that after 16 to 24 hours of labor or membranes that have been ruptured for over 6 hours, the possibility of infection is very positive.

2. **Narrowing of the Pelvic Outlet:** A Bi-ischial diameter approaching 7 cm; a Post sagittal measurement of 9 cm or the total of the same two nearing 15 cm means marked embarrassment. A narrow outlet is detectable to the examining hand and should be recognized before labor. No test of labor is advised.

3. **Previous Caesarean Sections:** Always determine if the same indications applicable to the first delivery are still present; was a classical type of section used previously; was infection present and how large is this particular child. Always be suspicious of a previous uterine scar and consider a placenta over such a scar as a definite hazard. A moderate trial at labor, under strict observation is usually safe.

4. **Pelvic or Uterine Tumors:** They may make a section absolute but otherwise are seldom an indication. Tumors in the posterior part of the lower uterine segment tend to become impacted under the sacral promontory. Uterine tumors may be a factor in inertia.

5. **Pre-eclamptic Toxemia:** A section is seldom indicated in this condition unless previous adequate treatment has completely failed and maternal convulsions or foetal death is imminent. A primipara with no dilatation or a multipara with an undilatable cervix will influence your decision. The mortality during actual convulsion, to both mother and child, make the procedure extremely doubtful.

6. **Central Placenta Praevia:** I would like to think that the old procedure of plunging a hand through a placenta, doing an internal podalic version and extraction is gone forever. A placenta praevia, especially in the prima gravida and when the foetus is alive, should be included in the absolute indication.

7. **Abruptio Placentae:** Here opinion varies tremendously and your personal judgment is on trial.

If labor is active, progress definite and bleeding moderate (irrespective of foetal conditions) I would say "no." If haemorrhage is active and immediate pelvic delivery not practical, I would say "yes." Do not operate if your mother is in shock from any cause.

8. **Transverse Presentation in a Primipara:** External version almost invariably fails at this stage. If the membranes have been ruptured very long an internal podalic version is difficult and dangerous; always ask yourself why such a presentation occurred. It often means pelvic inlet disproportion and this may be the more important consideration.

9. **General Maternal Conditions:** We may mention:

(a) Diabetes. A question of surgical delivery or early induction before the baby dies, is a debatable point. Such a baby is usually large and will not tolerate instrumental trauma.

(b) Cardiac Disease. The danger here is grossly exaggerated except in the presence of actual cardiac failure and decompensation. Labor with well considered instrumental assistance is usually well tolerated.

(c) Tuberculosis. You must decide which is the more dangerous, a surgical operation or the effort and stress of actual labor.

I would suggest, that in any of the above, your course of action be largely influenced by consultation with a competent internist.

10. **Habitual Intra-Uterine Death of the Foetus:** Would not an early induction be more advised?

11. **Breech Presentation in a Primipara over 40:** This is probably her only pregnancy and labor may be difficult.

12. **Threatened Uterine Rupture:** This may occur through a previous scar or result from a neglected and unrecognized disproportion. If immediate vaginal delivery is not practicable a Caesarean is imperative. Conditions that justify high forceps, especially on a floating head, are extremely rare.

13. **Previous Babies Lost After Difficult Forceps Extraction:** Each case must be evaluated separately especially in regard to the estimated size of each foetus. Probably an early induction should have been done.

14. **Following Extensive Vaginal Plastic Repair:** We can mention the repair of either vesico-vaginal or recto-vaginal fistulae, extensive plastic repair with a lot of scar tissue resulting or previous laceration of the sphincter ani. You can protect a posterior vaginal wall considerably at labor, or do an episiotomy, but the anterior wall is a different problem.

15. **Prolapse of the Cord:** The question of parity, dilatation of the cervix and condition of the foetus all must be considered. If the baby is

dead the cord being prolapsed ceases to be a factor.

16. Impacted Face or Brow presentations.

Contra-indication to Caesarean Section:

No list of contra-indications can be given without due consideration of the type of section proposed. A few very general and very incomplete remarks may be made:

1. A dead baby, except in marked pelvic contraction and certain conditions associated with abruptio placentae or central placenta praevia, usually contra-oblige Caesarean Section.

2. With foetal monstrosities choose the type of delivery least hazardous to the mother.

3. Active labor, with ruptured membranes, for 24 hours usually contra-indicates any section other than an extra-peritoneal or Parro-type of technique. Extensive vaginal manipulations may be included in this observation.

4. Fever during labor or obvious infection makes extra-peritoneal technique or removal of the uterus advisable.

5. Active Eclampsia, except in rare conditions, will contra-indicate any abdominal approach.

The foregoing remarks are very incomplete. Probably a good working basis is "know your indications and you will have little difficulty with contra-indications."

Questions:

No. 1—**Question:** Would you not lower the age for section in a primipara with a breech presenting from 40 to 30 or 35?

Answer: (Dr. Abbott) A section in this circumstance was not done because of a breech presentation which is not an indication for Caesarean delivery. At 40 or over it is probably her only pregnancy, her chances for a live baby, delivered vaginally, are not encouraging and to her this child is imperative. A section is indicated. At 35 years of age not one of the above indications is positive. At 35, it may be considered with great limitation.

No. 2—**Question:** (Dr. Abbott) Do you regard foetal distress, without prolapse of the cord, an indication for Caesarean Section?

Answer: You must first determine why the foetus is in distress. If it has been a long labor of 36-48 hours with little progress you have probably missed the diagnosis of cephalo-pelvic disproportion for the past 2 days. However, we will assume actual foetal distress. What would you do? The essential factors are the condition of the cervix and relative pelvic and cephalic measurements. If the cervix is dilated or nearly so, the pelvis apparently adequate in size (especially in a multipara) I would attempt vaginal extraction. However, with poor dilatation or dilatability, a questionable pelvic capacity, and especially in a prima gravida, I would do a section. The many factors

that may enter the picture will qualify your decision enormously.

No. 3—**Question:** When would a symphyseotomy be indicated in preference to a Caesarean in outlet contraction?

Answer: (Dr. Abbott) This operation is supposed to be easily performed. I have never used it but on two occasions have seen it done unintentionally by brute force during forceps extraction. Any contraction of the outlet marked enough to require symphyseal division should have been easily recognized before labor. However, with a head impacted in the pelvis, the baby alive and obvious infection excluding an abdominal section, it must be considered. If the foetus was dead a craniotomy would be indicated but very difficult.

Answer: (Dr. Hunt) Following the teaching of the French school of many years ago, a number of people still follow their teaching and do symphyseotomies. I recently saw one and the result—the urethra had been completely severed so it appears to require skill. As stated by Dr. Abbott, the indications must be very definite.

Dr. Elinor Black:

Mr. Chairman, Ladies and Gentlemen: It is difficult to review statistics briefly, so I am just going to give you some general over-all averages which I think will present the picture to you. There have been some marked changes in Caesarean Section statistics in the last decade due to the sulfa drugs, the antibiotics, the blood banks, and now early ambulation. It is interesting the number of reports one sees in the literature from centres where there has been no maternal mortality for the past 2, 4, 5, or even 10 years. However, the general picture is not quite this cheerful. Ten years ago the average maternal mortality was 3.2%; now the average is less than 1%. The maternal morbidity ten years ago was about 50%; now it averages about 15%. But along with these decreasing figures is an increasing figure of incidence, which I suppose we might expect. It has risen from an average of 2.5% to an average of 5% or over. It is hard to assess accurately the rate of incidence because it varies so greatly in different centres. One can find figures all the way from an incidence of .51% right up to 10.5% which shows the difference in conservatism or otherwise in the various centres. McIntosh Marshall has done recently an extensive survey in Great Britain and the incidence from that survey is 6.2%. On this continent it runs a little lower than that, averaging about 5%. The important point about this rate of incidence and its increase is that it has increased about three times as much in private practice patients as it has in public or ward patients. When one considers that the

patients in the private class have actually fewer babies than their less fortunate sisters, it suggests that perhaps some indications other than those which Dr. Abbott has given us are being taken into consideration. I think a conservative estimate for the rate of incidence should be between 2 to 4%, and not more than that.

As to the maternal mortality, we must remember that Caesarean Section is a surgical operation and therefore has the irreducible risk of .24% that goes with any abdominal surgery. The optimum Caesarean Section risk should be not more than 1% and preferably about .5%; actually these limits take in most of the figures that are given at the present date. In Great Britain, Marshall's average figure for maternal mortality is .99%. On this continent it is a little lower, averaging about .66%. Here again the figures are subject to great variation because of the indications and the condition of the patients before the operations are done. The maternal mortality from the lower segment operation is constantly lower than that from the classical operation, running about .6% for the former as against 2.19% for the latter. These again are Marshall's figures. The trend is very much toward the lower segment operation, so that the preponderance of this operation over the classical type ranges anywhere from 52% to 94.5%.

As Dr. Hunt mentioned, the extra-peritoneal operation has many technical difficulties, but it is done in about 3% of cases taking an over-all average, with the exclusion of Waters' series of his own private cases where the extra-peritoneal rate was 45.8%. The incidence of Caesarean hysterectomy remains fairly constant throughout the years at about 1.4%, for the reasons that Dr. Hunt has mentioned. As to the question of repeat sections, that is whether the woman shall be allowed to deliver normally following a Caesarean Section, the figures range all the way from 12% right up to 87% of repeat operations, which shows a great diversity of opinion.

Maternal morbidity has fallen a good 50%. In 1939 it was reported at about 50.5%; now it ranges from 26% to 10%. However, in very good centres one still finds maternal morbidity rates of 43%. This naturally depends on what the standards of morbidity are and how much chemotherapy is used before operation, these being factors which affect the morbidity figures and tend to give a variable statistical result.

Foetal mortality, unfortunately, has changed very little in the last ten years and still runs an over-all average of 6%. When we consider that prematures account for one-third of this infant mortality, it makes the future seem a little more hopeful because nowadays with incubators and better understanding of the care of the premature baby we may be able to lessen that loss from

prematurity and bring the 6% mortality figure down much lower. The consideration of foetal deaths cannot be done briefly. One must take into account the prematures, the over-sized babies, the stillbirths, the neonatal deaths, as well as the maternal factors of type of operation, length of labour, anaesthetic used, condition of the membranes, along with haemorrhage in the later months of the pregnancy or concurrent systemic disease. Therefore I think the way to sum up the foetal mortality statistics is to say that in the favorable elective case of Caesarean Section we should aim at a foetal mortality of not more than 1%.

Question:

Someone has asked: Once a Caesarean, always a Caesarean? Dr. Hunt and Dr. Abbott may say what they feel about this. I think each case must be judged on its own merits as to whether a repeat section is to be done. However, here is a set of figures given in a report by Feeney on three large maternity centres in Dublin: There were 858 repeat operations; 2 were done on 284 patients, 3 on 158 patients, 4 on 70 patients, 5 on 23 patients, 6 on 10 patients, 7 on 5 patients, and 8 on 2 patients.

There is another question here: Could the incidence of premature babies in Caesarean Section be reduced by more conservative management of placenta praevia or antepartum hemorrhage? My feeling is that probably it could. That is one type of case where more attention could be paid in the interests of the foetus if we want to improve the foetal mortality statistics. On the other hand, we must remember that the mother must undergo the risk of a surgical operation and she is our first consideration. If we wait until severe hemorrhage occurs before operation, the baby is going to be in poor condition anyway, even for abdominal delivery, so I doubt very much if one would gain a great deal in foetal salvage by delaying the operation in hemorrhaging cases.

Types of Caesarean Section

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Mr. Chairman, Members, Guests: The shifting trend in Caesarean Section as to indication, incidence and technique, is one of the most interesting chapters which we currently observe in the practice of obstetrics. Doctor Abbott has given an excellent and considerable listing and discussion of all indications. The obstetrician faced with an indication for Caesarean Section has the choice of four procedures, namely, classical Caesarean Section, low cervical Caesarean Section, extraperitoneal Caesarean Section or Caesarean-hysterectomy.

tomy (Porro operation). If the obstetrician, for some hypothetical reason, were limited to only one of these procedures, he would do well to choose the low cervical Caesarean Section for reasons to be enumerated.

Classical Caesarean Section

The Classical Caesarean Section, in our opinion, should be reserved for patients not in labor and where there is a very poorly defined or poorly developed lower uterine segment. If speed is essential for the best interests of the fetus or the mother or both, this is also an adjunct indication but the greater blood loss and the fact that most low cervical Caesarean Sections can be done with little waste of time reduces this indication somewhat. On rare occasions when the fetus is in acute distress such as in the presence of a prolapsed cord, a classical section may have some advantages and it is the simplest type of Caesarean Section to do at the time of Caesarean-hysterectomy.

Low Cervical Caesarean Section

From the above, it will be seen that a Classical Caesarean Section should have a relatively minor place in considering the different varieties of this operation. It is generally conceded that, if labor or rupture of the membranes has progressed in an appreciable time, a low cervical operation should be done unless one considers an extraperitoneal operation if labor has advanced for many hours with ruptured membranes. If this is true, namely, that the low cervical section protects the patient from infection, then it seems reasonable that where elective Caesarean Section could be done by this technique, it would be superior to the classical operation. Other advantages for low cervical Caesarean Section in elective cases are as follows: (1) less hemorrhage, (2) the scar is placed in the non-contractional part of the uterus, and (3) peritonealization of the uterine wound which seems to leave less in the way of adhesions in subsequent operations. Douglas of Baltimore, as well as Douglas of New York Lying-In, DeSopo of the Sloan Maternity Hospital and Studdiford, and several others feel that with proper chemo-therapy and anti-biotic medication, there is no more morbidity with a low cervical Caesarean Section in the presence of potential infection than there is with the employment of the extraperitoneal techniques. Furthermore, chances of injury to the bladder are reduced. Some of these authors actually feel there is less morbidity with the low cervical Caesarean Section under these circumstances. In our limited experience with the extraperitoneal operation, in only about 12 cases, we concur with this view. We even feel that there is some question whether or not residents should be trained in these operations.

Caesarean-Hysterectomy

In the case of active infection (now a very rare situation), Caesarean-hysterectomy seems indicated. Other indications for Caesarean-hysterectomy are multiple uterine fibromyomata of any size or giving rise to definite symptoms or obstruction to the birth canal. We feel definitely that Caesarean-hysterectomy is far superior to Caesarean Section followed by extensive myomectomy, for in our experience, the danger of thrombophlebitis and embolic phenomena and other complications is increased when the uterus is allowed to remain. Other indications for Caesarean-hysterectomy are advanced age in multiparity of child-bearing women in the presence of hypertension, toxemia and numerous Caesarean Section scars.

Part II

Symposium on Uterine Prolapse in Menopausal and Post Menopausal Age (Treatment)

Doctors Counsellor, Abbott and Black

Dr. Abbott, W.F.:

Uterine Prolapse in the Child-Bearing Age

This is the problematic period, when the maintenance of menstruation and fertility must be considered, and as a result, your choice of corrective procedures will be correspondingly curtailed. I will divide treatment into two parts, namely—Prevention of Uterine Prolapse and the Treatment of Prolapse when Established.

A. Prevention of Conditions Resulting in Prolapse:

1. Recognition of cases that should not be delivered by the vaginal route. You might refer back to the indication for Caesarean Section. It is questionable if "high forceps" should ever be applied. They always result in structural pelvic damage.

2. Avoid unwarranted delay during the second stage of labor. Constant pressure on the anterior vaginal area or the pelvic floor maintained for hours must result in tissue disruption.

3. Use "assisting forceps" in the latter part of the second stage without hesitation. Maintain the advancement a uterine contraction produces—"you don't need to pull."

4. Maintain an empty urinary bladder during labor. A full bladder is an obstruction and easily damaged.

5. Perform a well executed episiotomy (if indicated) in an elective situation rather than wait for a disruption of the perineal body probably involving the rectum.

6. Avoid exotoxics (unless indications are very definite) in the first or second stage of labor. The damage done is inconceivable. They are "pushing forceps without any control" as compared to "pulling forceps with at least some control."

7. A properly conducted third stage of labor to avoid resulting subinvolution. This term is falsely applied only to the uterus when it actually involves all pelvic structures including the pelvic supports.

8. Do an immediate and accurate repair of all visible lacerations. It is no disgrace to tear a perineum. It is a disgrace to not admit it and leave it unrepaired.

9. Afford adequate attention to subinvolution, uterine displacement and cervical infection during the Post-partum Period. I am particularly keen about the correction of Post-partum retroversion and subinvolution. Seventy-five to eighty-five per cent can be cured by the proper use of a pessary. I do not say that a retroverted uterus is a pathological hazard in a pelvis, but I do maintain that a uterus in normal position gives the patient a functionally and symptomatically better pelvis.

B. Treatment of Actual Prolapse in the Child-Bearing Age:

The cases fall naturally into three groups:

1. Those demanding relief but where menstruation and fertility is to be maintained. We will here include perineal lacerations involving the rectal sphincter. You cannot leave them in this deplorable condition. Fistula into the rectum or bladder must be closed. Stress incontinence, if actual, also requires relief. The occasional case occurs with so much uterine and vaginal wall prolapse that a repair is justified. In the latter I prefer a uterine suspension and perinorrhaphy or some modification of the Manchester Vaginal Technique. The hazards of future pregnancies and vaginal delivery must be fully explained to the patient.

2. The second group includes those with associated pathology or concurrent disease which make future child-bearing impossible or ill-advised. You may here consider large symptomatic uterine fibroids, heart disease, uncontrolled diabetes, tuberculosis and mental derangements. Medical certification and consultation is required. Any type of procedure is appropriate generally with hysterectomy or sterilization. From a surgical standpoint they are comparable to the menopausal group and Dr. Black will tell you all about them.

3. This is the debatable group where too much surgery is undoubtedly done. Much of the surgery done for moderate prolapse shortly after

delivery and in the ages of 30-40 years is absolutely unwarranted. You must evaluate all conditions very critically. Remember that subjective symptoms are of much more importance than objective signs and structural defects. They must be actual and not the result of an over-active imagination. Only surgical procedures which preserve fertility can be entertained. This eliminates such procedures as Vaginal Hysterectomy, Ventro-abdominal Fixation, Watkins Interposition, the Le Farte occlusive operation or any of their various modifications. I am an enthusiastic advocate of a purely Vaginal Plastic Repair in this group (some modification of the Manchester Technique). I still use the operation taught me by Dr. Ward of New York, over thirty years ago and find it highly satisfactory. With amputation of the cervix only about 20% will remain fertile. Anterior wall repairs will recur more readily with subsequent deliveries and cannot be afforded much protection. Posterior wall repairs can be guarded more and an episiotomy with adequate repair will almost completely restore your anatomical result. The combined Abdomino-Vaginal approach is only done when there is some particular reason for entering the abdomen. The Gillian or Baldy-Webster Suspension (or any purely round ligament technique) has a poor record in subsequent pregnancies. A utero-sacral and broad ligament type of procedure has given me good results.

Dr. Counsellor:

Two types of treatment are in use. First, as medical approach or leave them alone with the use of some artificial support if necessary. The second, is to use some type of Surgical Repair. I think it is extremely important, particularly in this age group, that you accurately evaluate what that patient can tolerate in the way of Surgical procedure. It has been, you might say, my unfortunate position, in the past few months, to see a number of people in the 70 to 75 age group complaining of moderate prolapse and cystocele, when in fact their complaints should not be attributed to the amount of displacement they had. I think that, in your analysis of that patient, you should be awfully sure that the symptoms they complain of are due to the prolapse. I would like to show you a slide showing a prolapse with marked hypertrophy of the prolapsed Vaginal wall, in a woman about 65 years of age. She was seen incidentally for some other condition. I was called to see her and asked if she wanted it repaired. She said, "I certainly don't want it operated on." I then asked, "Does it bother you," and she replied, "Not in the least." I next asked, "How long have you had it," and received the answer. "Ever since my son was born, 35 years ago." My reply was, "This does not bother you, you do your work,

your bladder and rectum are all right, I wouldn't have it fixed either," and I walked out. I simply show you this case to emphasize that there are certain conditions when prolapse and cystocele do not need surgical attention. There must be definite symptoms. A low type of Vaginal Hysterectomy is used in many institutions but in recent years is not used because there have been too many enteroceles following the procedure. At the Mayo Clinic we have inaugurated a Vaginal Hysterectomy which I planned to discuss with you but time is running out. It is similar to a Total Abdominal Hysterectomy but done in a reverse manner and associated with adequate anterior and posterior vaginal wall repair. One operation which you can do in this group is the Watkins Interposition operation. The Manchester operation, which is very prevalent in Australia, New Zealand, Great Britain and Canada, is a very favorite procedure. As we go South and toward the East coast, the composite operation of Spalding-Richardson, is used extensively. I do it occasionally but not very often.

Dr. Black:

In this age group there are two considerations which we must remember. First, the uterus is no longer necessary for child-bearing, and second, it is very apt to be the site of some pathological lesion such as an infected or lacerated cervix, fibroids, or an endometrial dysfunction. Therefore in treating these cases we must consider the fact that we do not need to save the uterus necessarily, and certainly if there is any indication that there is a pathological lesion present, it is undesirable that it should be saved. So there are two methods of treating these cases; first, using the uterus as an integral part of the repair of the prolapse, and second, removing the unhealthy organ.

One operation in which the uterus is used in order to reconstitute the proper pelvic anatomy is the modification of the well-known Manchester operation, in which the fascial layers are reformed in such a way that the uterus is once more supported in its normal anatomical position. Occasionally a ventral suspension of the uterus is done following the repair from below, but in a well-done Manchester type of operation this added surgery is seldom necessary.

A second operation which makes use of the uterus is the Watkins' inter-position, in which the fundus is brought out through the anterior fornix and is placed under the bladder to bolster it, the

fundus being sutured to the tissues beneath the pubic arch. The disadvantage to this operation is that although the uterus may be healthy at the time that it is put into this abnormal position, there is no guarantee that it is going to remain healthy, and should a future curettage be necessary, it is very difficult to get at the cavity. Also the removal of the uterus from the false position in which it has been placed is very difficult.

In the operations where the uterus is removed, we have first of all vaginal hysterectomy with a repair of the cystocele and rectocele and perineal body. I feel very strongly that vaginal hysterectomy alone has no place whatever in the treatment of prolapse. If it is to be done, it must be accompanied by proper plastic procedures on the anterior and posterior walls of the vagina.

Another operation which entails removal of the fundus, but which presents more technical difficulties is the Spalding-Richardson composite operation. In this the vaginal portion of the cervix is removed followed by what amounts to a supra-cervical hysterectomy, thus leaving a ring of cervix with the fascial attachments at the base of the broad ligaments. This ring of cervix is used as the keystone for the plastic repair of the prolapsed vaginal tissues. I do not think that this operation is used very much in Canada, certainly not in Western Canada, but the surgeons in the United States who use it and have mastered the technical difficulties—because it is more difficult than the other procedures mentioned—have found it very satisfactory indeed.

Fixation of the uterus, or suspension alone, in women at the menopause has small place in the treatment of prolapse unless combined with the upper supportive repair done from below. A prolapse cannot be cured by hanging the uterus from the anterior abdominal wall.

Any operation which results in the occlusion of the vagina is not indicated in this relatively young age group. The vagina must be left, following repair, as a functioning organ. Also, I think it is unwise to temporize with pessaries or any sort of vaginal supports in this age group. These patients are usually good operative risks. We know that the pessaries are only a temporary measure and will not result in a cure. Therefore I feel that these women should have surgery done while they are in good physical condition rather than to wear pessaries until advancing years increase the surgical risk for them.

MEDICINE

Anemia—A Sign of Disease

Paul Green, M.D.

I present this topic somewhat apologetically, because most of us realize that anemia is a sign of disease, and not a disease in itself. At the beginning of the century it became apparent that many manifestations of disease which were thought to be diseases in themselves were not actually so, but in reality were only signs of various disease entities. Perhaps we could take fever as an outstanding example, and today most of us appreciate the fact that fever in a patient is a sign of disease, and is not a disease in itself. With the advent of specific therapy this fact is often ignored, and many cases in which fever is a prominent sign are treated with antibiotics, and only if no satisfactory response occurs do we look further and attempt to find the underlying cause of the fever. Now this is perhaps justifiable by its expediency, if one can ever justify inferior medicine by expediency, because by and large those diseases that produce fever are acute, short-lived diseases; the patient gets better without the benefit of accurate diagnosis, which from a practical point of view doesn't matter.

If we consider anemia as a sign, it is not quite so justifiable, because the diseases that produce anemia are often of a more serious and chronic nature, and much valuable time can be lost by treating them with blanket therapy which is so often used today, as evidenced by many proprietary preparations that one finds on the drug market. Therefore, we should bear in mind that the discovery of anemia in a patient is a sign of disease, and not a disease in itself.

Now, I thought today we could illustrate by a few case histories, which admittedly are unusual cases, the fact that anemia was an important sign that was overlooked. To begin with, however, we should define what we mean by anemia. This is not so easy, in terms of total body hemoglobin, but we shall refer only to hemoglobin content of blood as a sample is taken from the patient. In order to determine the level of hemoglobin below which we would consider significant anemia to be present, we took a series of 250 healthy adult males, and by a reasonably accurate method, determined the hemoglobins of these men. We found, of course, that the majority of these men had hemoglobins of about 100% (100% was equal to 15.6 gms% hemoglobin). Only two had values less than 90% and these two had hemoglobins of 89%. We therefore felt that a man who has a hemoglobin less than 90% probably had a significant degree of anemia. We attempted

to do the same thing with a group of presumably normal adult women. We found that the readings were spread over a wider range. We know that iron deficiency anemias are quite common in women, and undoubtedly some of these so-called normal women were probably not normal. By and large, we found that most of the group had hemoglobin values between 85 and 105% and we felt that probably anything below 85% in a woman should be looked on with suspicion.

Macrocytic Anemia

The first case was quite an interesting case all the way around. This was an intelligent man, who had never been ill, 56 years of age—an advertising manager. In July, 1939, he began to tire easily. The thing he noticed (he was an ardent golfer, and had always been able to play 18 holes without much difficulty) was that by the end of the 9th hole he was done in and had to quit. One particular day he was so disgusted at the end of the 9th hole that he left, and phoned his physician, also a personal friend of his, and demanded an immediate interview. His physician was a very busy man, and crowded him into his afternoon practice, seeing him about 5 or 5:30 when he was a little fatigued, and also knowing the patient well probably didn't go into the case too fully. The patient had also noticed that he was somewhat constipated lately; and the net result was that he got a pat on the back and was told to take a little epsom salts, and advised that after all, he was 56 years of age and couldn't expect to be a young fellow all his life. He went home and took his epsom salts, but he didn't feel any better. A month later he had to give up golf completely because after a few holes his ankles were swollen, he was short of breath and was unable to carry on further. At the urging of his friends he consulted another physician, and this doctor noticed that the patient was short of breath, that his ankles were swollen, and on examination detected a heart murmur, and going no further he told the man that he had a murmur in his heart, that he should take things easy and gave him digitalis to take. The patient went home prepared to die at any moment, and took his digitalis. He did not feel any better. He consulted a third physician who examined him completely and did an hemoglobin estimation. He told the patient he was anemic and gave him some iron pills to take. The iron didn't do him much good, and over the next few weeks he began to notice that his hands and feet felt numb. He was pretty well disgusted with the entire medical profession by this time. He got in touch with his insurance salesman, got a list of recommended doctors,

selected one, and being a rather astute gentleman he figured that what happened when he went to the doctor and told him his story was that the doctor listened, made up his mind and then looked for evidence. Therefore when he consulted this last physician he said, "I am not going to tell you anything. I want you to examine me completely and do anything you want, and when you are satisfied, then I'll tell you anything you want to know." Of course by this time he was a classical case of pernicious anemia. He was a rather heavily built man, with snow-white hair, blue eyes and long ears. He had an icteric tint to his skin, his tongue was smooth, he had loss of vibration sense, and so on. He had no acid in his stomach after histamine. He had a macrocytic anemia, and a megaloblastic bone marrow, and the diagnosis was quite easy. A slide of his peripheral smear showed the characteristic cells so typical of pernicious anemia; rather egg-shaped, large red cells and scattered among these the rather peculiarly shaped poikilocytes—almost enough to make the diagnosis of pernicious anemia, but not quite. A smear of his bone marrow showed the megaloblasts which are the hallmark of macrocytic anemias and particularly pernicious anemia. In response to liver injections his hemoglobin rose, he got the usual reticulocyte response, his icterus fell fairly rapidly to normal, his white count slowly returned to normal and he recovered completely.

Now in reviewing his case, we can see a series of errors that occurred. The first physician saw him early in his disease, he was busy, he knew him personally, and was inclined to laugh the whole thing off. The second was carried away by certain physical findings and he did not pursue the investigation far enough. Perhaps if he had attempted to discover why this man had a cardiac murmur he might have made the diagnosis. The third man we cannot excuse at all. He made a very significant discovery. He found that this man was anemic, and he immediately put him on therapy without attempting to discover at all why he was anemic. If he had looked a little further, I'm sure he would have made the diagnosis and saved this man a lot of trouble.

The next case is a woman who was 63 years of age when we saw her, and her story was as follows: She was visiting her daughter in the United States, and her son-in-law happened to be a physician. She was feeling just not quite right, tiring easily, and she was examined by her son-in-law. Of course, being her son-in-law, this enters into the picture too. But among other things he did her hemoglobin. He did it on the Tallqvist scale, which means that he put a drop of her blood on a piece of blotting paper and saw how red it was, which we know is a very inaccurate method of determining hemoglobin, but ap-

parently he determined her hemoglobin as about 40%, and from a smear of her's that he examined, he said, "You have pernicious anemia"; so he gave her liver injections, but also, to be extra sure, he gave her iron, copper and manganese by mouth. Well, she began to feel a lot better, and when she came back she reported here to the Out-Patient Department, and we could find nothing wrong with her. Her blood was perfectly normal, and there was nothing to find on physical examination and she felt well. Now the question is did she or did she not have pernicious anemia? Well, the first thing we did was a gastric analysis, and we found that she had some free hydrochloric acid, which made the diagnosis of pernicious anemia untenable, and therefore we felt justified in taking her off her liver injections, and over the two years during which we have observed her she has remained well and her blood has remained normal. The lesson in this case is that once again an accurate diagnosis was not made. The doctor thought she had pernicious anemia, but he wasn't sure so he put her on iron, and she may have had an iron-deficiency anemia and it was the iron that did the good; but she was condemned to a life of liver injections, which is what the diagnosis of pernicious anemia carried, or of vitamin B12, but anyway, a life of therapy, on not very secure grounds. And certainly before condemning a person to take treatment for as long as he lives, it is worth while taking a little more time and establishing accurately, the diagnosis. One must have, of course, the anemia, no gastric hydrochloric acid after histamine, a megaloblastic bone marrow, and an adequate response to liver alone. These are the minimum requirements for making a diagnosis of pernicious anemia.

The next case also illustrates an interesting aspect. This was a man who began to have difficulty in walking, and he went to consult his local physician who examined him and found evidence of neurological disease. He also thought he was a little anemic, from his appearance, and so he was given multiple therapy, amongst which was folic acid. He got progressively worse, and eventually went into a nearby city to seek further opinion. He was examined in the city and it was discovered that he had ataxia, his lower limbs were spastic, and so were his upper limbs, his speech was a bit slurred, and he had gross nystagmus. His hemoglobin was found to be 85%, which we would consider as significantly diminished, but apparently it was not considered to be out of keeping with his clinical picture. A diagnosis of disseminated sclerosis was made, and the man was sent home with no suggestions as to therapy. Now interestingly enough, this patient's sister developed the classical picture of pernicious anemia at about the same time. She lived in

another town and was treated and got the usual satisfactory response that pernicious anemia patients get. In discussion of her family history, she mentioned the fact that her brother was having a great deal of difficulty in walking, and her physician suggested that she should let them know that she had pernicious anemia, because this tends to be a familial disease, and it might help them in diagnosis. The result was that a few months later this man was brought to see the sister's physician. At this time he was a complete invalid. With crutches and support he was able to walk a short distance, but he had a severe peripheral neuritis, and also some posterior spinal cord damage. He also had the classical findings of pernicious anemia, because he had stopped his folic acid. He was put on liver therapy, and his blood responded very well. His neurological lesions improved considerably, so that eventually he was able to walk with a cane. There will always be some permanent damage, however. The slides of his bone marrow and peripheral blood picture were typical of pernicious anemia.

This case illustrated the fact that the anemia could have been an important clue to the nature of his disability; and that the blood picture was partially masked because of inadequate treatment for "anemia."

The next case is that of a man in his sixties, who went to his physician complaining of feeling weak and tired, and having vague general aches and pains. In the course of the examination it was noted that his complexion was a little sallow, his tongue was a bit smooth, and his hemoglobin was 50%. His color index was 1.2, his white cell count was 3,000 and it was felt that perhaps he was a case of pernicious anemia, so he was put on liver. He got no response. Indeed he was going down hill, feeling weaker, and losing weight, and he was sent into hospital for investigation. Physical examination was essentially as before, except that there was more marked pallor, and a somewhat yellowish tint to his skin, not really a true icterus, but enough to suggest the appearance of pernicious anemia. His blood smear was not quite characteristic. He had some large cells present and some poikilocytes, but the large cells did not look quite like those of pernicious anemia. His prostate was stony hard, and the suspicion of carcinoma of the prostate with metastases was suggested. X-rays of his bones did not show any change, however, his alkaline and acid phosphatases were considerably increased. Gastric analysis was not possible as he could not tolerate a tube; and the bone marrow did not show megaloblasts, which was neither here nor there because he was receiving liver injections and these cells disappear from the bone marrow within a few days after liver therapy is

begun. Later, definite X-ray evidence of carcinomatosis of the bones appeared was put on stilbestrol following which his pains diminished and he felt stronger, although his blood picture has not changed, and his general course is downhill.

With this case, we'll leave the macrocytic group of anemias. All that is macrocytic is not pernicious anemia, as this last case demonstrates.

Microcytic Anemia

Another important group, the microcytic hypochromic anemias, almost always mean iron deficiency, and this almost always means blood loss. It is a common anemia in women, who lose blood every month, and also lose iron to each fetus that they produce. It is this group that gives us a false sense of security in the use of iron preparations, on speculation, in the treatment of "anemias," as they generally do so well. However, the bleeding need not always be from such a benign source. Particularly is this true in the male, where such an anemia is almost diagnostic of a bleeding lesion in the gastrointestinal tract.

The next case is that of a man in his late forties, who had some dyspepsia, and was examined and found to be anemic. He was treated with one of the proprietary preparations which contained a little bit of everything, and not enough of any one thing to do much good. Now his dyspepsia, of course, did not change on this, and he was eventually admitted to hospital for examination. In his smear we noticed the pale red cells, smaller than normal, and these funny little cells which suggest the presence of repeated blood loss. The gastrointestinal tract is at once suspect, and the finding of blood persistently in the stool supports this. Parium series disclosed the presence of an hiatus hernia of his stomach; these not infrequently give rise to bleeding and may produce this blood picture. The patient was treated with an ulcer regime, and with iron by mouth, and his dyspepsia disappeared and his blood picture returned to normal. The slide showed his response to iron—he had a reticulocyte response. These cases respond to iron just as the pernicious anemia cases respond to liver. His red cell count, which was high, remained high, and his hemoglobin gradually returned to normal.

Three years later, this same patient returned to hospital with other symptoms, and a normocytic anemia, but this time it was due to pulmonary tuberculosis, and of course, did not respond to iron. Thus, in this case, we have two different types of anemia, both being signs of two different types of disease.

The next case, I think, illustrates the importance of tracking down an iron deficiency anemia. This was a man in his fifties, who had seen three

physicians by the time he was admitted to hospital. He had begun to notice a sense of fullness in his epigastrium with belching of gas, and so on, which seemed to be related to eating and which had begun over a year previously. In addition to that, he was having occasional attacks of vague, crampy abdominal pain associated with diarrhoea and vomiting. These attacks would last a few days and then disappear. When first treated, he was told that he had indigestion and was given tablets to take, without much improvement. Later on the diagnosis of "ulcer" was made, and he was put on an ulcer regime, without improvement. The third physician discovered that he was anemic, told him he had pernicious anemia, and treated him with liver injections, which did not improve his symptoms.

In hospital it was found that he had a marked iron deficiency anemia, and of course, there was lots of occult blood in his stools. Now the interesting thing is that nothing was noted by sigmoidoscopy, barium series and barium enema. However, it was certain that there was a lesion somewhere in the gastrointestinal tract. A repeat barium series suggested something a bit suspicious in the ascending colon, and a repeat again showed that there apparently was a mass in the wall of the bowel there. At laparotomy, a carcinoma of the ascending colon was found, which was still resectable in spite of the year long history.

Here again, the doctor who found the anemia was missing a valuable clue. The tragedy too, is that these people will respond to iron. If you give them enough iron their blood picture will often improve even to normal values, and if you are just watching their hemoglobin you may feel well satisfied, while all the time the underlying disease is advancing. Microcytic hypochromic anemias are a very important physical sign, and particularly so in the male.

Normocytic Anemia

In the normocytic group the possibilities are much greater as there are many diseases that will produce an anemia of this type; infections, neoplasms, chronic nitrogen retention, leukemia, etc. This next case was a man in his sixties, who had the complaint of weakness, and fatigue, and nothing of localizing value. He was pale, his blood pressure was elevated, and his hemoglobin was depressed. He was treated for "anemia and high blood pressure" with pills. He began to complain of back pains, as well, and he was referred to hospital to have this pain investigated. The smear of his peripheral blood showed marked red cell

agglutination, and the presence of plasma cells, strongly suggesting the possibility of myeloma. The narrow aspiration confirmed this as the characteristic myeloma cells were seen.

The next case is that of a young girl, who was tiring easily, was pale, and was found to be "anemic." She was given liver, iron, and an assortment of vitamins and minerals which did not produce any effect. We saw from her smear, that her anemia was normocytic in type, there was a moderate degree of variation in size and shape of her red cells, and nothing much else was seen. She had hypertension too, and although the urine examination done in the physician's office was negative, repeated analysis in hospital disclosed occasional red cells and casts; and renal function tests showed that she had poorly functioning kidneys, and that she had chronic nitrogen retention. The anemia was associated with the chronic nitrogen retention. Hemoglobin values tend to fall progressively as the BUN rises, until when the BUN is about 80 mg% the hemoglobin is generally in the region of 40%.

The last case is that of a young man who worked in an assay office in a mine. His illness apparently began with an attack of diarrhoea which was followed by obstinate constipation, weakness and fatigability. Because of his occupation it was thought that he might have lead poisoning. His hemoglobin was 72%. He was treated with calcium, and iron for his lead poisoning and was not improving very quickly. During the Christmas holiday he decided to have himself checked over. He looked pale, and unwell. Investigation of his gastrointestinal tract was negative. He still had a moderate anemia, hemoglobin 70%, normocytic in type; sedimentation rate was rapid. No basophilic stippling was found, no lead line, no increased lead in urine. A chest plate was not taken at first because he had interval plates since his discharge from the services, and employment at the mine. However, finally one was taken, and pulmonary tuberculosis was found, although he had no chest complaints. On re-examination of previous plates, it could be seen that the disease was present earlier. Following appropriate treatment the blood picture gradually returned to normal as the underlying disease process subsided. Iron and liver have no effect on it.

In conclusion then, I would like to point out that anemia is not a disease; it is a physical sign and investigation as to the underlying cause of the anemia will lead to the diagnosis of the disease causing it.

The Future of Western Equine Encephalitis

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In the summer of 1941, there were reported in Manitoba, 509 cases of Western equine encephalitis, 78 of whom died. This local outbreak was the centre of a widespread epidemic covering the North Central States and the Prairie Provinces of Canada. The cases that were officially reported represent only a fraction of those infected. This epidemic was shown to be due to a virus, harboured by birds and transmitted to horses and man by mosquitoes (*Culex tarsalis*)¹, with specific immunological characteristics by which it can be recognized. Fear of further epidemics has been largely allayed by the relative infrequency of typical cases in the intervening years.

Discussion

A study of the yearly incidence of reported cases of "encephalitis" in the past eight years suggests that possibly we are still menaced by this infection. Following is a table showing the number of reported cases from 1942 to 1949:

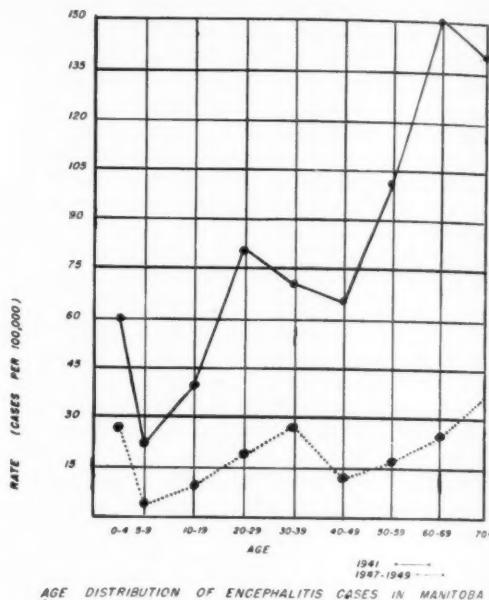
Table 1

	M.	F.	Total	Deaths
1941	351	158	509	78
1942	24	17	41	17
1943	8	5	13	3
1944	10	1	11	5
1945	4	4	8	4
1946	2	4	6	2
1947	55	26	81	6
1948	2	2	4	1
1949	24	11	35	3

It will be seen that there was a rapid falling off of cases immediately after 1941, although there have been two years, 1947 and 1949, in which an abnormal number were reported.

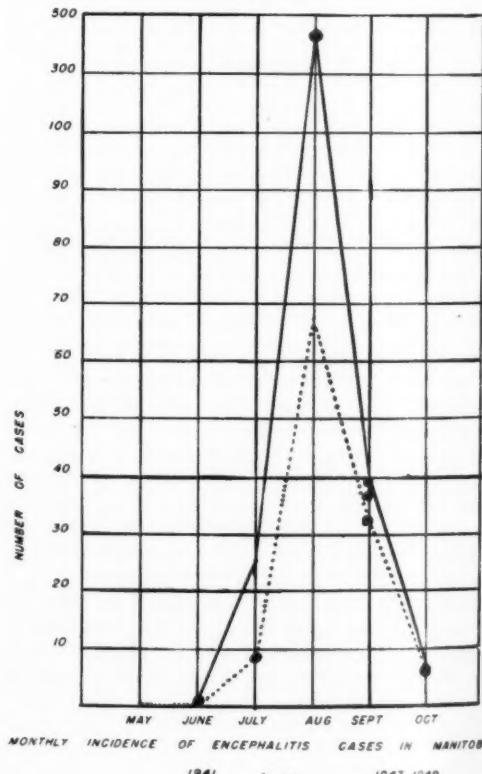
There is an inherent error in accepting the figures for "encephalitis" as representative of the occurrence of Western equine encephalitis since other diffuse central nervous system diseases are no doubt mistaken for this disorder and cases dying of Parkinsonism due to the encephalitis of 1919 are often reported "encephalitis" on the death certificate. However, there can be little doubt that the large number of cases in 1947 and 1949 was largely due to Western equine encephalitis. This conclusion is derived from a study of the age incidence, sex distribution, the month of onset and the clinical examination of the 79 reported cases.

Figure I



AGE DISTRIBUTION OF ENCEPHALITIS CASES IN MANITOBA

Figure II



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1. Age Incidence: Table 2 and Figure 1 compare the age incidence of these 79 cases with that of the 1941 epidemic. It is apparent that the age distribution is similar in each detail; each shows the same three peaks, one in infancy, one in the third decade and one in old age. These characteristics are less marked in the recent epidemics because of fewer cases and a larger relative error in diagnosis.

Table 2

Age:	0-4	5-9	10-19	20-29	30-39	40-49	50-59	60-69	70
Rate per 100,000,	60	20	39	80	70	65	100	150	150
1941									
1947 & 1949	26	3.3	9	17	26	11	16	24	36

2. Sex Distribution: In 1941 the sex distribution was 69% males and 31% females. In the 1947 and 1949 cases it was 68% males and 32% females. In both groups of cases there was little difference in the sex incidence in the very young and the very old. This is obviously due to the fact that at the extremes of life, the mosquito hazard is the same for both sexes, whereas, in the intervening years, the hazard is greater for males because of the increased exposure in out door occupations.

3. Month of Onset: The incidence of Western equine encephalitis coincides with the hot months since the disease can be transmitted to man only by the mosquito. This was strikingly demonstrated in 1941 when the onset was in the middle of July, there was a very high and sharp peak in August, 1941, and new cases ceased to appear after the end of September. Figure 2 shows that the onset dates of the cases in 1947 and 1949 were precisely at the same time.

4. Clinical Examination: The history, course, symptoms and physical signs of some cases examined in these two latter epidemics were identical with those seen in 1941. A summary of three cases treated in Deer Lodge Hospital is given below:

Case I

Male, age 55, farmer, Tyndall, Manitoba.

W.W. 1—Head wound. Occasional headache since. General health good.

August 8, 1949—Feeling ill when he got up in the morning. Anorexia. Vomited several times during the day. Complained of headache more severe than usual. "Passed out"; weak, perspired profusely on regaining consciousness. Rational.

August 9 and 10, 1949—Remained in bed, confused and irrational. Complaining of headache continually, mainly on top of his head.

August 11, 1949—Admitted to Deer Lodge, confused, talking incoherently, very restless, wouldn't stay in bed.

Examination—Face appeared flushed. No abnormal neurological signs. Skull defect lt. occipital region. Temperature 100.4.

August 12, 1949—Alternating bouts of restlessness and extreme drowsiness. Taking little nourishment.

Examination—Absent abdominal reflexes. Bilateral up-going toe. Temperature 99.0.

Laboratory—W.B.C. 12,000, N.81, L.18; C.S.F. Initial pressure 175 mm.; 127 cells, L 74%, N 26%; Proteins, 80 mgm. %; Sugar, 87 mgm. %; Chlorides, 670 mgm. %; Mastic, neg.

August 13, 1949—Sleeping quietly most of the time, but rational when awake. Taking fluids by mouth. Slight headache.

Examination—Abdominals absent. Plantar responses normal.

August 14-22, 1949—Marked general improvement. Completely rational. Still sleeping a good deal. Mild headache.

C.S.F. 102 cells, 89% L; Proteins, 105 mgm. %; Blood normal.

August 23 - September 9, 1949—Symptoms subsided except for occasional headache.

Examination—Abdominals still absent.

C.S.F. 5 cells; Proteins, 35 mgm. %; Sugar, 57 mgm. %; Chlorides, 742 mgm. %.

September 15, 1949—Discharged from hospital.

October 18, 1949—Feeling quite well. No residual signs or symptoms.

December, 1949—Blood negative for Eastern and Western equine encephalitis, St. Louis encephalitis, Influenza A and B, Mumps and Q fever.

Case II

Male, age 23, laborer, Selkirk, Manitoba.

August 7, 1949—Went swimming, onset of chills and severe headache, burning pain in eyes and stomach. Restless, slept poorly.

August 8, 1949—Went to work despite continuation of symptoms. Complained of headache at work. Found asleep under a tree during afternoon.

August 9, 1949—Again went to work but sent home because of abnormal behavior and drowsiness.

August 10, 1949—Headache and pain in eyes. Very restless and delirious. Admitted to Selkirk General Hospital. Temperature elevated.

August 10-15, 1949—In hospital. Delirious for first few days after that depressed and slept continually. Still complaining of headache.

August 15, 1949—Slept a great deal and acted strangely.

August 16, 1949—Still sleeping excessively. Got up and wandered away. No recollection of events of illness.

August 17, 1949—Admitted to Deer Lodge Hospital. Weak and drowsy. Seemed retarded in speech and manner but well orientated. Temperature normal.

Examination—Absent patellar, supinator and biceps reflexes. Abdominals present. Plantars normal. Blood normal.

August 18-22, 1949—Listless. Sleeping a great deal.

Examination—All reflexes present but difficult to elicit.

Laboratory—C.S.F., pressure, 110; Cells, 86:81% lymphocytes; Protein, 83 mgm. %; Chlorides, 723 mgm. %; Sugar, 65 mgm. %; Mastic negative; No growth.

August 23 - September 8, 1949—Progressive improvement. Symptom free.

Examination—Biceps and ankle reflexes absent.

C.S.F., 50 cells, 90% lymphocytes; Proteins, 50 mgm. %; Chlorides, 731 mgm. %.

September 9, 1949—Discharged. Feeling well.

October 18, 1949—C.S.F., 10 cells, all R.B.C.; Protein, 35 mgm. %; Chlorides, 768 mgm. %; Glucose, 90 mgm.

No residual signs or symptoms.

December, 1949—Blood negative for Eastern and Western equine encephalitis, St. Louis encephalitis, Influenza A and B, Mumps and Q fever.

Case III

Male, age 35, farmer, Reedy Creek, Manitoba.

August 30 - September 4, 1949—Onset of fairly severe constant headache. Diplopia. Slow and confused mentally, restless, drowsy, but continued doing chores.

September 5, 1949—Had to stop his work, lay down and slept for 5 hours during the day.

September 6, 1949—Admitted to Deer Lodge complaining of headache. Very drowsy. Temperature 101.

Examination—Face flushed, lips tremulous. Plantar reflexes equivocal.

September 7, 1949—Dozing and sleeping a good deal. Temperature 101.

Examination—Bilateral up-going toes. Blood, W.B.C. 13,500, N. 86, L. 14; C.S.F. Pressure 170; Cells, 710, L. 80%; Proteins, 75 mgms. %; Sugar, 83 mgms. %; Chlorides, 696 mgms. %.

September 8, 1949—Complaining of severe headache. Twice during evening found wandering in corridor. Confused. Temperature 100.

September 9, 1949—Temperature normal. Still drowsy.

September 10-21, 1949 — Progressive improvement. Clear mentally although recollection of illness is poor.

Examination—Plantars normal.

September 22, 1949—C.S.F. Normal.

September 23, 1949—Discharged from hospital.

November 7, 1949—Follow-up interview. Amnesia for events during first 5 days in hospital. Now feels well, face is ruddy but not as plethoric as on admission. Seems much brighter mentally.

December, 1949—Blood positive for Western equine encephalitis.

Because of the typical clinical picture—fever, headache, drowsiness, abnormal mental reactions, fleeting diffuse neurological signs and cerebro-

spinal fluid changes—there can be no doubt that these cases were due to Western equine encephalitis, despite the fact that in only one were antibodies demonstrated.

Comment and Summary

1. The virus of Western equine encephalitis is harboured by birds and transmitted to man and horses by mosquitoes. In Manitoba, of the thirty odd species, *Culex tarsalis* is the most likely vector. "The abundance of this genus is related to the high average mean weekly temperatures from the middle of July till the end of August . . ." Thus, with a constant reservoir of avian infection requiring only favorable weather conditions to release a flood of human disease, it is apparent that large epidemics are still possible.

2. Exposure to the mosquito hazard accounts for the predominance of the infection in males of middle age and for the equality of sex ratio in the extremes of life. Hence, methods of mosquito control and of human protection from the insect offer important measures for reducing the incidence of Western equine encephalitis.

3. The diagnosis of Western equine encephalitis is based on the history, clinical findings, cerebrospinal fluid changes and presence of antibodies in the blood.

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Report and Comments on the Red Cross Blood Bank, March, 1950

Cecil Harris, B.Sc., M.D., M.R.C.P., Provincial Medical Director

Comments

It will be seen that a grand total of 1199 bottles of blood was given in 808 transfusions. In addition 74 bottles of plasma or serum were issued for 58 transfusions. These figures represent a considerable increase over the amount used during February. Taking the number of bottles actually used, the increase amounts to 275 bottles. I am certain that this figure will startle many and in my opinion it reflects once again the fact that the Service beyond question fills a gap in the facilities which the hospitals and the medical profession are able to offer to the public. (Table I).

There has been a marked improvement in the delay before certain hospitals return unused blood, an example of the value of co-operation by hospital staffs. However, that so much blood is returned unused still calls, in my opinion, for comment and I would bring the position to the attention of visiting staffs.

Table I

Name of Hospital	Elective and Urgent			Emergency	
	Issued	Used	Returned Unused Transfusions	No. of Transfusions	Bottles No. of Used Transfusions
Winnipeg General	658½	361½	297	229	56 30
St. Boniface	497½	241	256½	172	30 26
Misericordia	209	162	47	118	14 14
Grace	184	121	63	84	8 8
Deer Lodge	81	50	31	38	6 5
Children's	16½	14½	2	15	1 1
St. Joseph's	25	21	4	14	7 4
Victoria	34	27	7	22	2 2
Concordia	38	29	9	17	5 5
Shriner's	6	3	3	2	— —
King Edward and King George	20	14	6	8	— —
St. Boniface San.	1	1	—	1	— —
Selkirk General	16	13	3	9	3 3
University of Manitoba Infirmary	1	1	—	1	— —
De Salaberry, St. Pierre, Man.	—	—	—	—	7 1
Clearwater Lake San., The Pas, Man.	—	—	—	—	2 1
Manitoba San., Ninette, Man.	4	—	4	—	— —
Totals	1791½	1059	732½	730	141 95

Private and semi-private patients who make their entrance into hospital well after the stipulated hours on the day before an elective surgical operation constitute a chronic problem for hospital staffs. Where blood is required for the operation, the problem extends to include the Blood Transfusion Service. To minimize the strain on my night staff, which is planned to cope with emergency work only, I would ask only this, that immediately such a late-comer arrives and it becomes known that blood will be required, a phone call to the Depot should be made to acquaint my staff of the fact. Transport can then call at the hospital on its way to or from another hospital. This is in preference to leaving the requisition and the specimen of the blood to be picked up at the late evening routine delivery, as is done at present. The practical result will be to minimize delivery of elective blood in the early hours of the morning.

As the Service in Winnipeg is now in full operation, discussions have been commenced with Brandon, Portage la Prairie, Dauphin and hospitals in the vicinity of Winnipeg and of the three other centres mentioned. It is not too much to hope that the entire province and the Lakehead area of Ontario will be covered by the end of the summer.

We continue to send appreciable quantities of plasma to the Connaught Laboratories, Toronto, for processing. A recent decision by Red Cross Headquarters puts us in the happy position of receiving processed plasma in quantities proportionate to the amount of raw material we submit.

Previously the amount issued to any depot was based upon a rigid percentage distribution across the map and thus, efficient depots, such as Edmonton, were carrying the rest of the country. Of the first 27 pools (each pool being from 20 donors) submitted from this depot, all have been reported as sterile by the Connaught Laboratories and my plasma technician, Miss C. Anderson, is to be congratulated on this impeccable record. Present stocks in the Depot amount to some 200 bottles of war-time serum and 45 of the new irradiated plasma. Until the supply of the latter is more plentiful, I feel none will disagree with my policy of reserving the irradiated material for children.

A recent visit of American surgeons to Winnipeg brought to us echoes of the difficulties which the American Red Cross are encountering in their endeavour to set up a community blood program similar to that now serving you and your patients. The Red Cross in the United States faces very strong commercial opposition and their program can in no way be compared to the one growing from strength to strength in Canada. However, to ensure real success for the Canadian venture full and active co-operation by the medical profession is essential. I have asked before that medical men and nurses should use their influence to direct relatives and friends of patients to the blood donor clinic. The number who have actually appeared is very small. It is but in your own interest and in the interest of your future patients that you should make a habit of exerting your considerable influence along these lines.

PATHOLOGY

Clinical Pathology (6)

Hematocrit

Paul T. Green, M.D.

The hematocrit gives one the amount of blood that is due to the red cells, and the amount of blood that is due to plasma. There are several ways in which plasma or red cell percentage of the blood can be determined.

One method that found widespread use during the war, was to determine the specific gravity of whole blood, and of plasma. By means of tables or nomographs, the packed cell volume of the red cells can be determined by this method, and by inference, the hemoglobin concentration. Serum protein could also be determined by this method. It is useful, but loses accuracy when abnormal blood is encountered. It therefore finds its greatest use in following the course of a single patient, following hemorrhage, or during an operation. The method may be detailed in this review in due course.

Another method is the dye dilution method, in which a known amount of a solution of a dye, such as congo red, that is not absorbed by red cells, is added to a known volume of blood. After mixing, the red cells are spun down, and the concentration of the dye is determined, generally by photoelectric methods. Knowing the amount of dye added, the volume of blood to which it was added, and the final concentration of dye in the mixture, the amount of plasma which diluted the dye can be determined, and hence plasma and red cell volumes can be known. This method is not as handy or as accurate as the method which is in general use; the determination of the red cell volume, by means of centrifuging and determining the "packed cell volume" of the red cells.

Principle

Whole blood is mixed with an anticoagulant which does not alter the size of the red cells. Obviously if the anticoagulant causes the red cells to either shrink, or to swell, the volume of red cells finally obtained will not be the true value of their volume.

Objections

When blood is centrifuged, the heavy particulate substances in the blood, such as the red cells, white cells and platelets, fall to the bottom of the tube. The faster the cells are spun, and the greater the distance of the tube from the hub of the centrifuge, the more tightly they will pack; up to a point. Also the length of time that these are spun comes into the picture, because the longer they are spun the more closely they pack, up to a point.

The centrifugal force is proportioned to the distance of the tube from the centre of the circle along which the tube is swung; and the force is proportional to the square of the velocity at which it is swung (in this case, the number of revolutions per second or per minute). It is therefore seen that the speed at which the tube is centrifuged is more important than the distance of the tube from the centre of the centrifuge.

A speed has been selected and a time, that gives the maximum packing of the red cells, consistent with practical work. This speed is 3,000 revolutions per minute, and the length of time is thirty minutes.

Even with this, however, the cells are not completely packed, and about 3% of the "packed cell volume" is due to plasma still contained between the red cells. However, normal values have been established on this procedure, and it is a useful practical laboratory measurement.

Any tube which has been calibrated in percentage volume can be used, but the tube devised by Wintrobe is usually used because it is of convenient size, and requires not more than 1cc of blood. The tube must be filled by means of a pipette drawn out into a long end, and a similar pipette is best used for cleaning the tube.

Anticoagulant

1.2 gm ammonium oxalate and 0.8 gm potassium oxalate are dissolved in water, and the total volume made up to 100 ml with water. 0.5 ml of this solution is placed in a clean, dry test tube, and the solution is allowed to dry, leaving the powdered anticoagulant mixture behind. Blood is obtained by venipuncture, using a dry, clean syringe and needle. 5 ml of blood is added to the test tube, and mixed by inverting a few times.

Method

A clean, dry Wintrobe tube is filled to the "O" mark with well mixed blood. There must be no air bubbles in this column. It is best to use two tubes, so that one tube can be used as a check against the other.

The two tubes are placed in a centrifuge; any of the standard centrifuges can be used, if they will revolve at 3000 revs./min. The centrifuge is then turned up to this speed, and the tubes are centrifuged for 30 minutes. When the tube is removed from the centrifuge, there will be a clear layer of plasma at the top; there will be a grey layer of white cells and platelets next, and finally the layer of packed red cells. Some of the plasma may have evaporated during centrifuging, so that the upper level of plasma may not be right at the "O" mark. This does not matter, if you were

certain that the tube was properly filled at the beginning.

The volume of red cells is read off, in terms of percentage, reading on the scale that has its "0" mark at the bottom of the tube; usually there are two scales, one with "0" at the top and the other with "0" at the bottom. These scales are, of course, reciprocal, so be certain that you are reading off % red cell volume, and not % plasma volume.

If an angled centrifuge has been used, then the upper margin of the layer of packed red cells will not be horizontal, but will be at an angle. Read the volume of packed red cells to the midpoint of this angled surface.

When two tubes have been used, they should both read the same values. If they do not, replace in the centrifuge and spin again for 15 minutes or so. If they do not read the same then, probably you had a bubble of air in one of them.

Normal Values

Adult Males: The red cell volume constitutes 45-55% of the blood volume.

Adult Females: The red cell volume constitutes 40-45% of the blood volume.

Infants and Children: Normal values are different at various ages.

Error: There is comparatively little error in this measurement; less than 3%.

Interpretation: Volumes greater than normal are seen in hemoconcentration, and in polycythemia vera and secondary polycythemias.

Volumes less than normal are seen in hemodilution and in the anemias.

Clinical Pathology (7)

Red Cell Indices

Paul T. Green, M.D.

Color Index (C.I.): The color index has been used in medicine for some time, and is a useful, simple, but rough method of estimating the type of anemia present.

The color index is expressed as $\frac{\% \text{ hemoglobin}}{\% \text{ red cells}}$

The difficulty is that there has not been agreement as to what 100%, is and that these figures differ from men and women. Therefore in order to obtain a true color index it is necessary to use the established 100% values for the region in which one is working. As the method is rather rough, with a probable minimum error of 8%, one can use average figures, and calculate the color index as if 100% hemoglobin were 14.5 gms% and 100% red cells were 5.0 million (that is, averaging the average figures of hemoglobin and red cells for males and females).

It is important to remember that the color index is merely an "index," and if there is any

question as to the type of anemia present, the more accurate indices described below should be used.

$$\text{C.I.} = \frac{\% \text{ hb}}{\text{red cells (millions) } \times 20} \quad \text{or} \quad \frac{\text{gms } \% \text{ Hb} \times 6.9}{\text{red cells } \times 20}$$

Normal Values: In normal males, the majority of color indices fall between 0.90-1.1. They tend to be somewhat lower in women.

Interpretation: Values greater than normal suggest the presence of a macrocytic type of anemia; and values less than normal suggest the presence of an hypochromic anemia.

Red Cell Diameter

The only accurate method of determining the red cell diameter is to sit down with a microscope and a micrometer eye-piece; measure the diameter of a thousand red cells, and determine the distribution and mean, with a Price-Jones curve; a much too laborious procedure to be of practical value.

Methods have been devised for determining mean cell diameter by "Halo tests," and other optical methods, but it has been shown that the error in these methods is so great that they are useless.

With a little experience, the examination of a blood smear is the fastest way of deciding whether the mean cell diameter is normal or greater or less than normal. The indices described below are reasonably accurate, and should be used to classify anemias. In order to determine these indices we must know:

1. Hemoglobin.
2. Red cell count.
3. Hematocrit (% red cell packed volume).

Mean Corpuscular Volume (MCV)

This is the volume of the average red cell, and is expressed in cubic millimicrons. (C.u.). It is calculated as

$$\frac{\text{cc's of packed red cells per liter of blood}}{\text{red cell count (in millions)}}$$

Example: Hematocrit is 42.2% red cell count 4.4. million.

$$\text{MCV} = \frac{42.2}{4.4} = 94 \text{ C.u.}$$

Normal: The average MCV, according to Wintrrobe, is 87, with a range of 80-94. Others have found somewhat different mean values.

Error: The average error is about 5%.

Interpretation: Values greater than normal suggest the presence of a macrocytic anemia; whereas values less than normal suggest the presence of microcytic anemia.

Corpuscular Hemoglobin (MCH)

This gives the amount of hemoglobin in the average red cell, expressed in micromicrograms (gg).

MCH = grams of hemoglobin per liter of blood
red cells in millions per cubic mm of blood.

Normal values: Average figure is 29 gg, according to Wintrobe, with normal range of 27.32.

Values greater than normal suggest the presence of a macrocytic hyperchromic anemia, whereas values below normal suggest the presence of an hypochromic anemia.

Mean Corpuscular Hemoglobin Concentration (MCHC)

This is an expression of the amount of hemoglobin per unit of red cell, and it is expressed as %.

MCHC =

hemoglobin in grams per 100cc of blood \times 100%

Volume of packed red cells per 100cc blood.

Normal values: The mean value is 35% with a normal range of 33-38%.

Interpretation: Values greater than normal do not occur, because normal red cells are "saturated" with hemoglobin. Macrocytes have more hemoglobin per red cell than is found in normal cells, but they do not have more per unit of red cells than normal. Values below normal suggest the presence of an hypochromic anemia. The interpretation of these indices is summarised in the table:

type of

	anemia	color index	MCV	MCHC
macrocytic	over 1.1		over 95	over 30
normocytic	0.9 - 1.1		80 - 94	over 30
simple				
microcytic	0.75 - 0.9		less than 80	over 30
hypochromic				
	microcytic	less than 0.7	less than 80	less than 30

ANAESTHESIOLOGY

Tracheotomy in Acute Laryngo-Tracheitis*

Bernadine Roe, M.D.

This is a brief report of a small epidemic—that is, sixteen cases of acute laryngo-tracheitis requiring tracheotomy. These were treated at the Winnipeg Children's Hospital during the year from July, 1948, to June, 1949. In the nine months of the following year, up to the present date, there have been three such cases.

One-half or eight of the cases occurred in the two months from early January to early March, 1949. The patients, seven females and nine males, ranged in age from eight months to six years. Most of the patients had histories of colds, mild sore throats and cough for three or four days, but were not considered very ill. Then a few hours before admission, they developed increasing shortness of breath and difficulty in breathing, hoarseness and harsh cough. Three cases developed these latter symptoms suddenly with no preceding cold. Most received steam inhalations for a while at home and were sent to hospital when no improvement took place.

Positive physical findings on admission were something of this order: fever, with temperature ranging from 101 to 104 F.; mild to moderate inflammation of pharynx and tonsils; rapid respiratory rate; varying degrees of suprasternal, suprasternal and infracostal indrawing or retraction; diminished air entry into the lungs. The children were often restless and apprehensive, "too busy breathing to cry."

The more desperately ill were pale, sometimes cyanotic, and on these tracheotomies were done immediately. The others received a brief course of

steam and oxygen inhalations. When the retractions increased and the general condition of the patient became worse, tracheotomy became a necessity.

Brenneman describes typical cases of acute laryngo-tracheitis and points out the difference between this disease and spasmodic croup. This latter is characterized by the abrupt appearance at night of a croupy cough, hoarseness and inspiratory dyspnoea which respond well to treatment with steam inhalations and emetics.

The sixteen tracheotomies were done by ten different surgeons. The time of operation varied from ten to fifty-five minutes.

The anaesthetics were administered by six different anaesthetists. The agents used included local infiltration with novocaine solution and inhalation of ether, cyclopropane or nitrous oxide. Oxygen was given in all cases, with or without helium. Difficulties encountered with inhalation anaesthesia were caused by the presence of much mucus in the mouth and throat, vomitus from recent meals, and poor air entry into the lungs with corresponding poor anaesthetic entry. As far as the records show, twelve cases had an airway established pre-operatively, either with an endotracheal tube or with a bronchoscope.

Ten patients had chest plates after operation. None showed any parenchymal infiltration. Eight had slight to moderate mediastinal emphysema: two of these eight had right-sided pneumothorax with fifty per cent collapse of the lung, and smaller left-sided pneumothorax. Also present in both cases was subcutaneous emphysema of the neck and chest wall.

Of these two children, one showed no particular symptoms and recovered uneventfully; the other

died sixteen hours post-operatively after the return of all respiratory symptoms. It is of interest to note that these two cases did not have an airway established pre-operatively.

In this regard, the work of Forbes of St. Louis, is worthy of note. From experimental work on dogs and by clinical observation, he has shown that pre-operative intubation significantly reduces the incidence of mediastinal emphysema and pneumothorax.

Aside from the one death, the only other serious complication was the secretion of thick mucus in three patients. The mucus was sufficient to cause great respiratory obstruction and to necessitate bronchoscopic removal.

All patients had their tracheotomy tubes removed by the eighth day and were discharged from hospital by the fourteenth day.

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*Read before the Meeting of the Western Division Canadian Anesthetists' Society, Winnipeg, March, 1950.

Canadian Anaesthetists' Society Manitoba Division

Fifth Annual Meeting of Western Divisions
March 23rd, 24th, 25th, 1950
Winnipeg

The Fifth Annual Meeting of Western Divisions of the Canadian Anaesthetists' Society was a decided success. The scientific programme was well balanced with papers upon clinical and research problems. The renewing of old friendships, the verbal battles of techniques in the corridors, the "have you heard this one" all in retrospect recall a most interesting three days.

Dr. R. D. Dripps, Professor of Anaesthesiology, University of Pennsylvania, guest speaker, was unable to come at the last moment on account of illness. Dr. Leroy Vandam, an associate of Dr. Dripps, ably filled in upon one hour's notice. Dr. Vandam, it is hoped, will make a return visit to Winnipeg in the not too distant future. Dr. R. A. Gordon, of Toronto, Executive Secretary of the Canadian Anaesthetists' Society, played two roles, one of problems connected with Anaesthesiology in Canada, the other upon block anaesthesia of which he is a master.

Thursday morning, March 23rd, was spent at St. Boniface Hospital with clinical demonstrations. The group met at noon with the regular staff meeting. Dr. R. A. Gordon spoke upon "Regional Anaesthesia for the Upper Extremity."

The first paper at the scientific session in the afternoon was given by Dr. Vandam upon "Some Unrecognized Facts About Pentothal." The speaker brought out a number of laboratory find-

ings which aid in correlating laboratory with clinical work. Dr. Bernadine Roe, Winnipeg Children's Hospital, presented a brief and interesting paper upon "Comments on Anaesthesia for Tracheotomy in Cases of Tracheo-Laryngitis." Dr. Louis Cherniack, Department of Medicine, Winnipeg Clinic, gave an excellent address upon "Assessment of Pulmonary Function." This paper brought out points that were of value in thoracic surgery.

The annual dinner was held in the Jade Room of the Fort Garry Hotel. Through the courtesy of Winthrop-Stearns Inc. some little time preliminary to dinner was spent upon,

"The grape that can with logic absolute."

The two-and-seventy jarring sects confute." Dr. L. D. Barnhouse presided with Dr. Weir, University of Manitoba, Department of Geography, as guest speaker. Dr. Weir showed colored Kodachromes, adding timely comments upon a trip with U.S. Task Force No. 80 to the Arctic in the Region of Ellesmere Island.

Friday morning, March 24th, was taken up with clinical work at the Winnipeg General Hospital with a short trip to the new Maternity Pavilion on Notre Dame. At noon the hospital generously provided lunch for those assembled. Scarcely ere the last sip of beverage disappeared Dr. R. A. Gordon had embarked upon a timely and interesting talk upon the problems confronting Anaesthesiology in Canada.

The first paper in the afternoon was by Dr. Donald Huggins upon "Recent Trends in Anaesthesia for the Geriatric Patient." Dr. Huggins paper seemed to conflict with the saw, "Life's a short summer, man's a flower." Dr. R. Cherniack, Department of Physiology, followed with "Prediction of the Effects of Sympathectomy for Occlusive Arterial Disease." Dr. R. Letienne, St. Boniface Hospital, presented "Anaesthetic Management of Surgical Cases in Urology." An interesting discussion followed.

At 8 p.m. in lecture theatre A of the Medical College, under the combined auspices of the Winnipeg Society of Anaesthetists, the Winnipeg Society of Obstetricians and the Winnipeg Society of Pediatricians, Dr. Vandam spoke upon the "Anaesthetic Management of the Obstetrical Patient." Non inhalation agents as regional, caudal, and subarachnoid block were fully dealt with. Many interesting points were raised during question time. Dr. Barnhouse presided. Refreshments in the coffee room brought a full day to the close.

Saturday morning opened at Deer Lodge with the group as guests of the hospital for luncheon. The first paper was given by Dr. Vandam upon "Pharmacologic and Clinical Aspects of Cyclopropane Anaesthesia." The speaker gave a full

clinical and laboratory review of cyclopropane as of today. Dr. J. Gemmill, Department of Research, Winnipeg General Hospital, kindly gave a review of "Isotopes in Medicine." A paper much appreciated by all.

In the evening the cares of the day were thrown aside as the group assembled with their ladies at the home of Dr. Huggins, 99 Niagara St., for a buffet supper. Here, for a brief span, the nagging voice of the surgeon, the irritative larynx, and the adiposity covering the impalpable veins of the obese Mrs. Brown, were forgotten. During this period old friendships were renewed, fresh contacts made with junior members and plans laid for the next meeting in Calgary in 1950.

Although all the Winnipeg Anaesthetists con-

tributed to the success of the meeting special mention should be made of Dr. L. D. Barnhouse, and Dr. R. G. D. Whitehead, President and Secretary, respectively of the Manitoba Division of the Canadian Anaesthetists. These two officers were never idle in all the long preliminary work before the convention. They carried the same spirit through the meeting. An unanimous vote of thanks was tendered to them for their efforts at the last monthly meeting of the Winnipeg Anaesthetists. Last but not least comes Mrs. Whitehead, Chairman of the Ladies' Committee. Under her direction and the members of her committee the visiting and local ladies made sport of the couplet:

"One-half of woman's life is hope
And one-half resignation."

GYNECOLOGY



Umbilical Cord Anomalies†

A. A. Earn, M.D., M.Sc. (Med.)*

Anomalies of the umbilical cord are due to (1) variations in length, (2) variations of insertion, and (3) torsion or knots.

Variations in Length

The average umbilical cord at the time of birth is 50 cms. in length (the crown heel length of a fetus is 50 cms.). Extreme lengths up to 198 cms. have been reported.

Long cords seldom produce symptoms, but they can prolapse or coil about the fetus. Looping is frequent, being present in 18% of cases in Gardiner's series of 35,000 deliveries¹,². Usually a single loop encircles the fetal neck, body or extremities, but two or more coils may be present.

A cord under 35 cms. in length is called a short cord, and may be apparent or real in nature. The incidence varies from 16.9% to 18.2%, while complications are present in 28.6% of short cords¹,⁴,⁵. The complications are delay in the second stage due to traction, fetal asphyxia, premature separation of the placenta, spontaneous intra-uterine cord rupture (rare), inversion of the uterus and umbilical hernia. Fetal malpositions and false labor pains have been blamed on short cords².

Variations of Insertion

The anomalies of cord insertion are a marginal or a velamentous type.

The marginal or "battledore" placenta is one in which the cord is attached at the margin. It occurs in 7% of cases and produces no symptoms⁷.

From the Department of Pathology in co-operation with the Department of Obstetrics and Gynecology of the Faculty of Medicine, University of Manitoba, and the Winnipeg General Hospital.

†Abstract from Studies on the Placenta.

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In the velamentous variety, the umbilical vessels pass for some distance between amnion and chorion before joining the placenta. Union occurs at one or more poles. The mechanism of development is unknown. The incidence is 1.25% in single pregnancies and 5% in twin births⁶,⁷.

The diagnosis of a velamentous placenta is difficult antepartum. If pulsating cord vessels are palpable within the cervix, over bulging membranes, in the absence of placenta previa, or accidental hemorrhage, the diagnosis of velamentous placenta should be considered. Kosmak reports a case where caesarian section performed for accidental hemorrhage revealed ruptured vessels in a velamentous cord⁶. The vessels can rupture antepartum producing exsanguination with death of the fetus.

Torsion and Knots

Torsion of the cord produces no symptoms, unless the twisting is marked, in which case, asphyxia will occur. Antepartum diagnosis is not possible.

False or true knots occur in the cord.

False knots are produced by the piling up of Wharton's jelly. Since the vessels are longer than the cord, folding occurs, giving rise to nodules. They are of no clinical significance.

True knots, though uncommon, seldom cause symptoms. However, Browne collected 25 cases in which knots produced fetal asphyxia and death⁸.

Summary

Anomalies of the umbilical cord are briefly described.

Cord anomalies which may become of clinical importance are:

1. Prolapse of a long cord.

2. Complications of a short cord as delay in the second stage, fetal asphyxia, premature separation of the placenta, uterine inversion and umbilical hernia.

3. Rupture of a vessel in a velamentous cord producing fetal death antepartum.

4. Pulsating cord vessels over a dilated cervix, in the absence of other abnormalities, may be due to a velamentous cord.

5. Severe torsion can produce fetal asphyxia and death.

6. True knots can produce fetal asphyxia and death.

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CASE HISTORIES—SURGICAL

Bilateral Cryptorchidism

Torek Operation

S. S. Peikoff, M.D., F.R.C.S. (Ed.),
F.R.C.S. (C), F.A.C.S.

This is the seventh of a series of Case Histories which will appear in the Review each month. The purpose of these publications is not to present rare or unusual cases but rather to consider the routine management of common surgical conditions.

Case No. 45-1955, Mr. A. H., St. Boniface, Hospital. Color, white. Age, 18. Occupation, elevator operator. Date of admission, February 11, 1945, and January 9, 1946. Date of operation, February 12, 1945, and January 10, 1946. Date of discharge, February 26, 1945, and January 26, 1946.

Complaint on Admission

1. Humiliated because he has no scrotal sac or pubic hair.

2. Only slightly attracted to girls.

Present Illness

About age of 16 (July, 1943), while out swimming with other boys he observed that he had no pubic hair and no scrotal sac like the others. He became quite sensitive regarding his appearance and gave up swimming in the nude, and sports in the gymnasium. He thinks he is only slightly attracted to girls.

Inventory by Systems

Eyes—Vision good.

Ears—Hearing good. No tinnitus.

Respiratory—Does not get colds. No cough, dyspnea, expectoration, or haemoptysis.

Cardio-vascular—No history of rheumatic fever. No palpitation. No dependent oedema.

Gastro-intestinal—Appetite good. Bowels regular. No dyspepsia or vomiting. No diarrhoea, blood or melaena.

Genito-urinary—No frequency. No enuresis. No pain or burning on micturition.

Nervous system—Sleeps well. Very bashful.

Metabolic—Gained about 5 lbs. in 1 year.

Musculo-skeletal—No aches or pains.

Past History

Measles, mumps, chicken pox as a child. Appendectomy, 1936.

No other illness, accidents or operations.

Family History

Mother—Age 45, alive and well.

Father—Age 50, alive and well.

Two brothers—Age 12 and age 14, alive and well.

No history of tuberculosis, malignancy or diabetes. Essentially negative history.

Physical Examination

Fairly well built boy of rather short stature, and very bashful.

Head and Neck:

Cranial nerves—Intact.

Eyes—Lids, conjunctivae normal. No ptosis or proptosis. Pupils equal and react to light and accommodation.

Ears—Canals and drums normal.

Nose—No obstruction.

Lips—Normal.

Teeth—Good.

Throat—Tonsils moderately hypertrophied.

Neck—No lymph glands palpable. Thyroid normal size; just palpable.

Face—Very few hairs on chin. Does not shave as yet.

Chest:

Heart—Normal size. Sounds of good quality. Regular rhythm. Rate 72 per minute. Blood pressure 125/70. No murmurs.

Lungs—No deformity of thoracic cage. Movements equal and symmetrical. Tactile fremitus good. Breath sounds good. No adventitious sounds.

Abdomen—McBurney scar present. Contour flat and symmetrical. Umbilicus appears normal—no hernia. Liver and spleen not palpable.

Genitalia—Penis fairly well developed with normal glans. Circumcised. No epi- or hypopspadius. Scrotum completely absent. No pouch. Median raphe well formed. No testicles felt on either side of raphe. Pubis—very few sparse pubic hairs.

Hernial Orifice—No herniae palpable. Small, soft, rounded mass felt in each groin above mid-point of inguinal region. No thrill on coughing. Does not increase in size on straining. Somewhat tender on pressure.

Rectum—Sphincter tight. No masses felt. Prostate present and small. Normal consistency. Extremities:

Upper—No deformity or wasting. Movements good. No clubbing of fingers.

Reflexes:	Right	Left
Biceps	++	++
Triceps	++	++
Supinators	+	+
Lower—No deformity or wasting. Movements good.		
Reflexes:	Right	Left
Knee	++	++
Ankle	++	++
Plantar	V	V

Clinical Laboratory

Urinalysis—Color, amber. Reaction, acid. Specific gravity, 1.028. Albumin, 0. Sugar, 0. Microscopic, negative.

Blood—Red blood cells 4, 952,000. Hemoglobin, 95%. White blood cells, 7,800. Polymorphonuclear. Neutrophiles, 74%. Lymphocytes, 26%.

Wassermann—Negative.

Estimation of 17—Ketosteroids, not available in this city.

Pre-operative Diagnosis

Bilateral cryptorchidism.

Indications for Operation

In this case, operation was performed chiefly for psychological reasons. Even though the operation is performed at the late age of 18, there is the remote possibility that he may still become fertile. It is indicated also to preclude the increased incidence of malignancy in undescended testicles. Successful operation may hasten the onset of secondary sexual characteristics.

Pre-operative Care

In spite of the fact that doubt has recently been expressed as to the efficiency of endocrine therapy in the treatment of patients with undescended testicles, I felt that a trial was worth while, if only on purely empiric indications, especially since this was a case of bilateral non-descendent.

A course of six weeks was given—250 rat units of pregnyl 3 times a week. In addition to this, he was given thyroid extract gr. i t.i.d. p.c.

At the end of 3 months there was no apparent improvement to warrant continuation of endocrine therapy.

Detailed Description of Operative Technique and of Operative Findings

Position—Supine.

Lower abdomen, perineum and upper ends of the thighs were painted with merthiolate.

Draped—prepuce was clipped to the skin of the abdomen with a towel clamp.

Incision—Along a line connecting the anterior superior spine and the spine of the pubis, the incision beginning at a point just 1 inch above the midpoint of the inguinal ligament and ending just above the spine of the pubis. The incision was carried through the skin, Camper's and Scarpa's fascia to expose the external oblique aponeurosis. Vessels were ligated with chromic catgut 000.

Formation of Scrotal Sac—The index finger was run down along the external oblique aponeurosis into the scrotal sac and the walls of the scrotum were stretched. A gauze pack about the size of an egg was introduced into this artificially formed pouch and left there to allow gradual distension of the sac during course of operation. The external oblique aponeurosis was now divided commencing at the external ring and extending just beyond the internal abdominal ring. The lower leaf of the aponeurosis was dissected free by gauze dissection in a downward direction and the upper leaf in an upward direction. The testicles, spermatic cord and hernial sac were then found in the inguinal canal at the internal abdominal ring. The gubernaculum was divided close to the lower pole of the testicle. Four Allis clamps were then placed on the outer covering of the cord and the cremaster fibres were split in the line of the cord. A haemostat was applied to the portion of the gubernaculum attached to the testicle, and slight traction applied in a downward and medial direction. The hernial sac was now opened by a longitudinal incision.

Mobilization of the Spermatic Cord—Two mosquito clamps were placed on the edges of the incision into the sac at a point about half-way between the neck of the sac and the upper pole of the testicle and by slight traction on these haemostats, the extremely thin peritoneal membrane was made taut. The peritoneum was then separated from the underlying internal spermatic fascia by blunt dissection, using a pair of fine mosquito forceps by alternately opening and closing until a tunnel was worked completely through and underneath the thin peritoneal sac. The peritoneum at this point was now divided transversely so that the hernial sac had been completely cut across. The proximal portion of the hernial sac was now picked up with forceps, and was lifted gently off the cord, and separated from it by blunt dissection. This was continued well up into the internal abdominal ring. On reaching the internal ring, the spermatic cord was further mobilized by blunt dissection with the index finger by freeing it in the retro-peritoneal space. The neck of the sac was then transfixated and ligated at its highest point.

Lengthening of the Spermatic Cord—The distal portion of the vaginal process was now separated from the cord up to the testicle and tied off. Many

of the bands of connective tissue binding the vessels in the spermatic cord were carefully divided and separated in a longitudinal direction, avoiding injury to the vessels or the vas deferens. The length of the cord was now measured, and found to extend just beyond the external inguinal ring. In order to increase its length further, the inferior epigastric vessels were cut and ligated, and the transversalis fascia was incised in the line of the incision. This increased the length of the cord by fully $\frac{3}{4}$ of an inch, sufficient to allow the testicle to reach the scrotal sac, comfortably and without tension.

Preparation of a Bed Into the Thigh—An oblique incision about 1 inch long was now made adjacent to the new scrotal pouch. A second incision of equal length was made into the scrotal pouch at this point, deep enough to expose the gauze pack in the scrotal pouch. The incision in the thigh was deepened by blunt dissection until the deep fascia of the thigh was exposed. The posterior edges of the skin thigh incision and scrotal incisions were now approximated to each other by interrupted silkwork gut in such a way that the knot was on the surface of the skin. The ends were cut and left long. An Allis forceps was now clamped on to the gauze pack in the scrotal pouch and as the gauze was removed from above through the original inguinal wound, the points of the Allis forceps were dragged up into the inguinal wound by the gauze pack. The Allis forceps was opened, the gauze pack discarded and the gubernaculum at the lower end of the testicle was seized with the Allis forceps, and the testicle pulled down through the scrotal wound into the thigh. The testicle was then sutured to the deep fascia of the thigh by 2 chromic i catgut sutures. The anterior edges of the scrotal and thigh wounds were then approximated, completely enclosing the testicle.

Closure of the Incision — The transversalis fascia was first closed by continuous suture up to the internal ring so that the spermatic cord was now posterior to it. The conjoint tendon was sutured to the shelving edge of Poupart's ligament by several interrupted chromic catgut i sutures closing the floor of the canal. The external oblique aponeurosis was sutured by continuous chromic i catgut. The skin was closed with interrupted silkworm gut. Then a piece of half-inch plain gauze was pulled through the opening in the base of the scrotum and the upper part of the

thigh and wrapped around the junction between the thigh and the scrotum. A gauze pad was placed on the wound and strapped with elasto-plast.

Anaesthetic

Pre-medication—Nembutal gr. 1½ at h.s. Morphine gr. 1/6 with atropine 1/150 in a.m.

Agent—Spinal metycaine 130 mgm.

Stimulants—Ephedrine $\frac{1}{4}$ gr.

Comments—Condition of patient satisfactory. No drains used.

Gross and Microscopic Description of Tissues Removed

None.

No specimen.

Final Diagnosis

Cryptorchidism.

Progress Notes Including Post-operative Care During Stay in Hospital

February 12, 1945—General condition of patient good. Pulse 72. Respirations 20. Blood pressure 120/80.

February 14, 1945—Up and around.

February 20, 1945—Stitches removed from the hernial incision.

February 23, 1945—Stitches removed from the incision in the thigh.

February 26, 1945—Discharged.

Condition on Discharge

Good.

Follow-up Notes Since Leaving Hospital

January 9, 1946—Re-admitted to the hospital. Testicle disconnected from the thigh. No biopsy was done at this time to determine spermatogenesis since this is not available in this hospital.

January 10, 1946—Left testicle was brought down in a similar manner as previously described.

January 26, 1946—Discharged from hospital.

July 5, 1946—Testicle disconnected from the left side.

February, 1948—Condition of the patient excellent. Scrotal sac perfectly well formed. No atrophy of the testicles. Normal sensation on pressure. No complaints. Pubic hair normal distribution. Patient completely satisfied.

June, 1948—Scrotal sac normal. Patient perfectly happy and satisfied. The patient is kept under observation at the present, to determine fertility in the future.

DERMATOLOGY

Topical Dermatologic Therapy

Saul S. Berger, B.A., M.D.

The dermatologist in treating skin diseases, employs everything that is known and useful in medicine and surgery. He employs antibiotics and chemotherapeutic agents, vitamins, hormones, analgesics, and other drugs, as well as surgery, electrosurgery, cold, heat, actinic energy, roentgen rays, radioactive elements and isotopes. Dermatology therefore profits from medicine and surgery and is indebted to them. On the other hand, it is not generally appreciated that studies of the skin and its reactions have contributed to the discoveries and advancements made in medicine as a whole. In cancer and carcinogenesis, in the field of infections, in allergy, in the general sphere of sensitization to simple chemical compounds, in psychosomatic medicine, dermatology has played and is playing an important and vital role. In addition, the dermatologist, who is ever alert for cutaneous manifestations of internal diseases, can be of great assistance to his medical and surgical colleagues.

Topical and purely dermatologic therapy then, plays only a part in the therapeutic armamentarium of the dermatologist. It is, however, an important part, and one at which every physician may become proficient. The therapy is highly specialized and precise, though admittedly highly empiric. Topical therapy is regarded by many physicians as unscientific therapy. It may be unscientific in that often one does not understand all phases of the exact mechanism set in action by a given therapeutic agent. The dermatologist may not be able to explain the manner in which sulfur is helpful in seborrheic dermatitis, but neither can the cardiologist, for example, explain the precise way in which the conductivity and threshold for stimulation of the heart is reduced by digitalis. The use of coal tar in dermatology is said to have begun when Dind in Lausanne noticed that his dog's eczema cleared up promptly after the animal had fallen into a puddle of undiluted coal tar at the edge of the road. Is this not similar to Fleming's discovery that a staphylococcus growth was inhibited in the vicinity of the contaminating column of Penicillium Notatum?

The dermatologist must be considered fortunate because he can apply therapeutic measures directly. He does not in most cases have to use the intravenous or intra-muscular route in order to have the therapeutic agent reach the organ he wants to treat. The physician would like to be able to treat an ulcer of the stomach as easily as a dermatologist can treat an ulcer of the skin. He would like to treat parasitic infestations of the

other organs as easily as the dermatologist, for example, treats scabies.

In the scientific use of his remedies, the dermatologist is in a healthy position. "He can more readily than most physicians locate and accurately classify the lesion in his field, identify the micro-organisms, parasites, and histopathologic changes, through gross and microscopic study, obtain data on the observations of the skin at the affected site, and observe objectively the organ's reaction to functional tests and therapeutic measures."

The dermatologist is at a disadvantage in therapy, however, because more so than in other specialties, he requires the co-operation of the patient. Failure of the patient to carry out therapy properly, dooms the therapy. There are many considerations in prescribing or planning topical therapy. Not only the irritancy, sensitizing properties, systemic toxicity and therapeutic effectiveness of the preparations must be considered, but also the sensations on application, the consistency of the preparation, its color, odor, stickiness, soiling properties, relative ease of application and removal, and countless other factors. In addition to time spent in weighing all these considerations, and having selected his topical therapy, the dermatologist must explain to the patient the manner and frequency of application, the manner of removal, the expected beneficial action, and the possible by effects of the remedy. These have to be gone into step by step, and explained and illustrated to the patient. One can readily appreciate how time consuming but how important for a good result all this is.

It is not the purpose of this article to discuss specific treatment for specific diseases, but rather to explain the logic and sense behind topical dermatologic therapy. Prescriptions can easily be procured in dermatologic textbooks, which also explain the manner of application, removal, etc.

The following comprise the usual forms of topical therapy:

1. Baths—non-medicated and medicated.
2. Wet Dressings.
3. Poultices.
4. Powders.
5. Lotions.
6. Emulsions or Liniments.
7. Tinctures.
8. Ointments or Salves, Creams.
9. Pastes.
10. Fixed Dressings.
11. Plasters.
12. Direct application of chemical or physical agents.

Each one of these measures will not be discussed separately. Rather the rationale and use of some

of these measures in treating the different stages of the skin in its response to insult, will be explained. Those agents not mentioned in this plan will be discussed later. There is:

Firstly—The Acute or Immediate Stage.

Secondly—The Subsiding Stage.

Thirdly—The Infiltrative Stage.

Preliminary Preparation of the Skin

Dried exudation, crusts or scales, mechanically obstruct external application, and therefore it is necessary to cleanse, denude, and freshen the acute or chronic infections which are to be treated.

Treatment of the Acute or Immediate Stage

The skin shows an immediate response to insult by redness, the purpose of which is to raise temperature, give off heat, and to bring more immune bodies to the zone. Then there is the formation of the blister or vesicle which is a protective device. The blister raises the surface of the skin, and puts an intervening barrier between noxious agents and tissues, and helps to wash away and dilute the noxious agent. For this red, swollen, blistering, oozing skin, the best treatment is wet compresses, which in itself acts like a blister. It protects the area from further harmful agents, it dilutes the noxious substance, it helps to wash it away, and it removes heat. It seems to keep the humidity and temperature constant.

Treatment of the Subsiding Stage

For this less acute, less weeping stage, it is best to use a powdery lotion or a tincture. Lotions are liquid and semi-liquid preparations usually having as their base, water or alcohol or witch hazel or mixtures of these, and containing ingredients in solution or suspension or both. Tinctures are solutions of active ingredients in alcohol, ether, chloroform, or other organic solvents.

The lotion, with its powdery particles, allows for efficient heat loss because it creates a large surface for irradiation and evaporation. Similarly, tinctures increase heat loss by evaporating quickly and becoming volatile at temperatures lower than water. One should realize that the skin has voluntary and involuntary movements. Just as the surgeon splints a fracture to prevent movement of broken bones, so the dermatologist, by the use of lotions and tinctures, splints the skin.

Powders are useful in very acute, widespread and inflammatory conditions, for example, acute dermatitis, ringworm in intertriginous areas. Powders act like wet dressings in the respect that by virtue of their physical properties, they increase the available surface for evaporation. On a dry skin, powders protect from the irritation of the air and of friction, and also exert a cooling effect. One should rarely prescribe powder for moist surfaces since they retain infection and prevent surface drainage. They are good in the treatment of

intertriginous areas, for example, between the toes, groins, or beneath pendulous breasts. Powders are useful for their physical properties alone, but powders may incorporate many beneficial agents. Thus powders containing certain fatty acids (e.g. Desenex, Sopronal) are fungicidal and bacteriostatic. Powdered menthol is cooling and anti-pruritic, and powdered sulfur is anti-parasitic.

Powders usually possess four qualities: the ability to cover an area, the ability to stick to an area, the ability of promoting slip, and the possession of bulk. By varying the percentage of different agents in the powder formula, one can prescribe a powder for different uses and different areas. To illustrate:

For cover—zinc oxide.

For bulk—mag carbonate.

For stick—zinc stearate.

For slip—talc.

One can see that on exposed areas, cover is important; on greasy skin, stick is important, because the greasier the skin, the less the stick; on intertriginous areas, slip is important. The necessity for bulk is self-evident.

Pastes are also useful in acute, oozy conditions such as vesiculating and weeping eczemas. If there is more than 50% powder in a grease base, that constitutes a paste. The powder makes the paste relatively permeable to fluid. Thus perspiration, serum, etc., which cause maceration, take place to a far less degree than under ointments. Paste is superficial in its action, and is a valuable protective agent. Peeling pastes are useful in acne vulgaris. The peeling property is usually due to resorcin and sulfur.

Treatment of the Infiltrative Stage

This phase of infiltrative response to insult, is characterized by thickening and lichenification of the skin. The purpose of therapy is to retain heat and fluid, and to macerate the surface, that is, to remove and soften the tissues. Our object in applying topical therapy is closer contact with the tissues, and so we use ointments.

Ointments are preparations containing less than 50% powder in a grease base. Grease bases are usually of four kinds; mineral, animal, vegetable and synthetic.

The Mineral Base is usually inert. It is used for superficial protection, and hence it is described as being **epidermic**. An example of such a base is solid petrolatum.

The Animal Bases take up water and have their effect within the skin. Thus they are described as being **endodermic**. They penetrate the superficial layer. The active agent in animal bases is cholesterol. An example of such a base is lanolin and beeswax.

The Vegetable Bases accept water and are very oily. These bases are largely endodermic, but are

to some extent diadermic, that is, epidermic and endodermic. The active agent in vegetable bases is phytosterol.

The Synthetic Bases are epidermic in action. They are usually hydrogenated oils, for example linette wax, cetyl alcohol.

In summary, for more surface effect, we should use mineral and synthetic bases; for deeper effect, we should use animal and vegetable bases. All cosmetics are epidermic fat and fat-like substances.

C. Guy Lane of Boston, states that the most important functions of bases are as follows:

A. They carry the drug to the skin and hold it there.

B. They influence the penetration of a drug into and through the skin.

C. They alter the texture of the skin.

D. They alter evaporation from the cutaneous surface.

E. They protect the skin.

F. They aid in the removal of cutaneous secretions.

We have yet to discuss briefly, baths, poultices, creams and oils, fixed dressings, plasters, and direct application of physical agents.

Baths, when frequent and hot, and accompanied with plenty of soap and scrubbing, are beneficial to individuals with oily and greasy skins. Conversely, these baths are harmful to people with dry skin, such as are usually seen in infants, early childhood, and old age. Soap and water irritate eruptions such as eczema of the hands, monilial infections, etc. Non-medicated baths are useful in their cleansing action only. They remove dirt, debris, crusts, scales and the sticky remains of previous medications. Medicated baths are anti-pruritic, soothing, reduce congestion and inflammation, and their active medicinal ingredients may be anti-parasitic, anti-seborrhoeic, and anti-eczematous.

Our young lady today, soaking in her bath, is using hot water, scented soap, and bath scents too frequently and excessively. They cause the removal of sebum and oils and the resultant too dry skin of trunk and limbs. While our young lady is doing all this to her body, her face, with its usual over-production of sebum, is heavily covered with cold-cream and greases, "tissue creams" and "skin food," and is assiduously shielded from the soap and hot water which may be badly needed to remove the layers of dirt and grease and horn. Knowledge of sebaceous gland function in different parts of the body would lead one to advise reversal of these female practices. The face should be washed and the body greased.

Poultices are applied hot, and are useful in the treatment of boils and abscesses. They are an easy way of maintaining constant application of moist heat.

Emulsions or Liniments are a form of transition

between lotions and ointments. They are oil or fatty substances emulsified or suspended in an aqueous or other liquid or aqueous solutions suspended in an oily medium. They are not as drying as lotions, and are not as messy as ointments which necessitate bandaging. One can embody many therapeutic agents in emulsions. They are very useful in treating patients confined to bed. One can paint large areas with medicated emulsions.

Creams are fat and fat-like substances bound in water. If 80% of fatty acids are saponified, we get a lathering cream. If 20-40% of fatty acids are saponified we get a brushless shave, and if 20% or under of fatty acids are saponified we get a cold-cream. Cold-cream is a water in oil cream, and through its evaporation, exerts a cooling effect not as good, but similar to a wet dressing.

Fixed Dressings are bandages containing material which hardens and stiffens, giving the effect of a more or less flexible cast. Unna's boot is a good example. They are useful in that they prevent scratching and they protect the skin from trauma and external irritants. They support the skin and structures immediately beneath the skin, and therefore should be used in dermatoses due to varicosities, such as eczema, certain forms of ulcers, and pruritus.

Plasters consist of masses which will adhere to the skin. In this way, cloth or other backing material may be fixed. They allow medication to be brought into close contact with the skin surface and are chiefly occlusive and macerating in action. Thus they are useful in treatment of callosities, corns, plantar warts, etc.

The Direct Application of Chemical or Physical Agents. Chemical agents like podophyllin, silver nitrate, and trichloroacetic acid for example, are applied directly to the skin. Roentgen rays, radium, grenz rays, thorium-X, light—particularly ultra-violet rays, cold, heat, and electrolysis are examples of physical agents applied directly to the skin. It is impossible to discuss the above in the present article. They are mentioned only for the purpose of completion. They represent, however, important and useful topical therapeutic agents.

Most preparations used on the skin are anti-pruritic, keratoplastic, anti-eczematous, anti-parasitic, antiseptic and emolliifying.

1. In general, the **Anti-Pruritic** agents used cool by evaporation, and are all to some degree impermeable, protective agents. They are effective because itching may be relieved by substituting some other sensation, such as that of cold or heat, and by protecting the skin from external influences such as scratching, other trauma, changes of temperature, etc.

2. **Keratoplastic Agents** are those which tend to produce an increase in thickness of the horny

layer of the skin. Horn formation is promoted by mild stimulation and irritating agents. The agent must not be irritating enough to cause rapid destruction or rapid desquamation. Reducing agents are those which tend to draw oxygen from the tissues, and when used in low concentrations, may have a keratoplastic action. The normal process of keratinization or cornification is a reduction of oxygen and water. This process goes on when the basal cell layer is building up to the stratum corneum.

3. **Keratolytic Agents** are those which tend to remove the horny layer or to reduce its thickness. Medications that are so called keratolytics, act by withdrawal of fluid from the tissues, with the ensuing throwing off of the loosened dried out mass, or by maceration of the horny lamellae and then imbibition of fluid and subsequent throwing off. Reducing agents such as sulfur, chrysarobin, tar, salicylic acid, in high concentrations, are keratolytics.

4. **Anti-Eczematous Agents** usually act in various ways and in combinations of ways. Some agents relieve itching and prevent scratching, some promote keratolysis, and others a reducing action; some cleanse, some subdue inflammation and cool by simple protection, and others because keratoplasia itself is protective.

5. **Anti-Parasitic and Antiseptic Agents** act by destroying or inhibiting the effects of living agents of disease. Thus they are directed against pathogenic bacteria, fungi, mites, and common animal parasites (ascari, pediculii).

6. **Emolliifying Agents** are employed to soften the skin surface. Ointments with cholesterol, lanolin, and oil are useful, as are cold-cream and other water containing creams.

Dr. Marion B. Sulzberger mentions six important parts in dermatologic management and topical therapy. In brief they are:

1. Make a diagnosis as soon as possible.

2. Topical therapy is useful in cases of unknown or uncertain etiology or diagnosis, as well as in the period before diagnosis is made, and in many cases with known diagnosis and etiology.

3. Therapy is often based on the morphologic characteristics of the lesion, and therefore these must be accurately appraised and recognized. One must decide whether a dermatosis is acute or chronic, dry or exudative, papular or vesicular, infected or not infected, irritable or torpid, superficial or deep, hyperkeratotic or not, of exogenous or endogenous origin, destructive or non-destructive (atrophy or scarring), and malignant or benign.

4. One then chooses topical remedies for specific purposes according to the characteristics of the lesion (e.g. soothing, protective, absorbent, drying, macerating, keratolytic, penetrating, reducing, or destructive effects). It is wise to use

a few remedies and know everything about them; their properties, incompatibilities, and other contraindications. Remember that a remedy may harm rather than help, and when in doubt, and in all irritable and acute dermatoses, begin with mild and most indifferent agents. Observe the effects of your medications on a small site before applying it more extensively. Frequent observations on the effects of the medicaments are necessary, not only to prevent ill effects, but for adjustment and modification of treatment. If a dermatosis is proceeding satisfactorily, do not change treatment.

5. A remedy that disagrees with the patient must be stopped, and one should find the cause of the disagreement. In many patients the cause is an allergic eczematous hypersensitivity. "When this is the case, consider each of the ingredients and their combinations, as well as the measures and the substances used in the application and removal of the prescribed medication. Scrutinize also the way in which the remedy was prepared and dispensed. Remember that minute traces of contaminants often cause allergic skin reactions. Gritty salves, pastes or emulsions improperly homogenized or unevenly dissolved or dispersed chemicals, may be sources of irritation. Therefore the practitioner of external therapy must have some knowledge of the dispensing and of the appearance, feel, odor, and other characteristics of every remedy he prescribes. He must be able to discover the errors made by the pharmacist, or to discover a pharmacist with sufficient knowledge and conscientiousness to avoid the many possible errors."

6. The action of topical remedies will often depend on the mode of application and removal. It is the duty of the physician to explain this fact and to instruct the patient accordingly. This is often time consuming and tedious, but it is necessary. In prescribing topical medication, one must consider social and occupational duties, lack of funds and facilities, or that time may prevent the patient's proper use of beneficial agents.

There is in topical therapy then, more than what meets the eye. To repeat, it plays only a part in the therapeutic armamentarium of the dermatologist, but it plays a useful part, and to be properly executed requires training, time, and patience on the part of the physician, and co-operation on the part of the patient, for failure of the patient to carry out the therapy, dooms the therapy.

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ORTHOPEDICS

Hip Joint Disease During the First Decade and a Half*

H. FUNK, B.A., M.D., Ch.M.

We are dealing here with probabilities rather than possibilities, and knowing two facts, (1) the age of the patient, and (2) the fact that he suffers from a hip limp, is sufficient information on which to make a tentative diagnosis. To have made a tentative diagnosis is to start along the road of treatment subject to confirmative investigation.

Congenital Dislocation of the Hip

This is the commonest cause of a limp first noticed when the child begins walking. If both hips are affected a waddling gait develops associated with increased lumbar lordosis. Physical examination reveals asymmetry of the buttocks, if there is unilateral involvement. The limp is a lurching one, the involved extremity is shorter, there may be increased adductor thigh folds, and abduction is limited.

Having learned to diagnose this condition when a limp appears seems to be adequate but in striving to improve ourselves we seek still earlier recognition. This may be possible if the attending doctor be sufficiently astute, be he the family doctor, the obstetrician or the pediatrician. Careful examination of the infant may disclose such a condition. With the patient supine, the knees and hips flexed equally and the feet flat on the table any gross discrepancy in the length of the two femora is evident by the fact that one knee extends to a higher plane than does the other, the lower one represents a shorter thigh. Increased adductor thigh folds and limited abduction of the involved hip strongly suggests a dislocated hip.

The findings at X-ray consist of an absent or poorly developed capital epiphysis with upward and lateral displacement of the upper end of the femur; the acetabulum is shallow by comparison with the normal.

Dr. Frejka has developed the abduction pillow splint for treatment before walking age but the important point about treatment is to begin it or have it instituted as soon as the diagnosis is made. The longer the delay the more difficult the treatment and the poorer the result.

Tuberculosis of the Hip

This is not nearly so classical in its relation to age since it may occur at any age, but when a limp develops between the ages of two and four years there is a strong probability of it being tuberculous in origin. There may be prodromal symptoms or the child may have established

tuberculous disease elsewhere which in itself arouses marked suspicion.

One point which may lead the attending doctor astray is that the patient complains of pain in the knee. I would emphasize that if investigation of pain in the knee discloses the knee to be negative it is imperative that the hip be examined, as frequently pain in the hip may be referred to the corresponding knee.

Coxa Planata

Commonly called Perthe's disease of the hip. It is an avascular necrosis of the femoral capital epiphysis. Its greatest incidence is between ages five and eight years. The onset may be with a painless limp which may first be noticed by the mother. Ultimately pain develops and there is associated muscle spasm and limitation of movement. The X-ray findings may be extremely variable but in the advanced case there is atrophy of the adjoining part of the neck, the capital epiphysis may be smaller, flattened and even appear to consist of several fragments. It, too, may be bilateral.

The necessity for treatment is well demonstrated when one examines the X-ray of a grossly distorted hip where no treatment has been carried out or where treatment has failed. Furthermore, it is a sure precursor of osteoarthritis in later life if deformity is not prevented.

Slipped Epiphysis

This term is commonly accepted as referring to the femoral capital epiphysis and the greatest incidence is between the ages of ten and fifteen. Here there is a downward and posterior displacement of the epiphysis. It may be traumatic, in which case the slipping occurs abruptly and causes immediate and severe disability. In the atraumatic form the process is usually gradual. In fact there is a pre-slipping stage if such be recognized, in which a slight limp may be present, muscle spasm and limitation of movement, but the X-ray reveals no displacement of the epiphysis. On close scrutiny, however, rarefaction may be evident at the neck adjoining the epiphyseal line.

Here again pain in the knee is a common initial complaint and the hip must be excluded. The antero-posterior view in the X-ray film may appear to be quite normal and can be said to be normal only when the lateral view also is normal.

Treatment has to be considered on the merits of each case but, generally speaking, the earlier it is instituted the better the chance of restoring the hip to normal.

It bears reiteration to remember the close association between hip limp and age, namely:

*Presented at St. Boniface Hospital as part of the Faculty of Medicine Refresher Course, April, 1950.

Walking age—Congenital Dislocation,
2 to 4 years—Tuberculosis,
5 to 8 years—Coxa Planata,
10 to 15 years—Slipped Epiphysis,
and it is most important to institute treatment as soon as the diagnosis has been established.

The Treatment of Compound Fractures*

E. S. James, M.D., F.R.C.S. (Eng. and Canada)

There have been many changes in the treatment of compound fractures since the introduction of the anti-biotics. However, the early principles of treatment retain their importance and must not be discarded.

First aid treatment consists of applying a sterile dressing to the wound and splinting the limb immediately. Movement at the fracture site must be avoided to minimize soft tissue damage and the dissemination of infecting organisms. Sulpha drugs and/or penicillin should be given as soon as possible. X-rays are taken and cultures of the wound made.

Early operative treatment is emphasized, so that reduction of the fracture may be done to minimize the damage of soft tissue from pressure of the displaced bone ends. The patient should be given a general anaesthetic and a tourniquet applied to the limb to control haemorrhage and to allow the operator to clearly define anatomical structures about the fracture site. Shave the area, and scrub the skin with soap and water, keeping the wound covered with a sterile dressing. Soap damages the exposed tissues and delays healing. However, the wound should be cleansed thoroughly with plenty of normal saline or sterile water, sponging out all blood clots and foreign material with sterile sponges. Excise the wound edges and all grossly contaminated tissues but do not sacrifice important nerves, arteries or tendons.

Do not hesitate to carry out internal fixation if necessary. Metal plates, screws, pins or wire may be used to retain the bones in proper position. Often one inserts these foreign materials, knowing that at a later date they will have to be removed but in the meantime they have served their purpose of retaining the fragments in correct position and alignment and so prevented deformities.

Small fragments of bone, either grossly contaminated or completely separated from periosteum or soft tissues need to be removed. However, one should do his utmost to retain larger fragments. When a large area of bone has been lost, maintain the length of the limb by internal plates, or Steinman pins incorporated in the plaster cast, until bone grafting can be done. The area should be sterile and the wound healed before bone grafting operations are carried out. With the use of anti-biotics one need not wait from six

to twelve months as formerly was the case. Again it has been shown that cancellous bone chips taken from the crest of the ilium will withstand some mild infection in the wound.

Where the overlying skin has been damaged it is necessary to excise it and cover the area by sliding a flap from an adjacent area or by applying a skin graft. Often a split thickness graft will be suitable. However, if the area is exposed to pressure or if at a later date an incision must be made in this area to expose the bone ends for bone grafting, etc., a pedicle graft will be necessary. One cannot do a bone graft with any hope of success unless the wound area can be closed.

All recent workers are in agreement that severed nerves must not be sutured at the primary operation. It is recommended that the anastomosis must be made about two to three weeks later when the perineurium is thickened and will retain the sutures. The perineurium in a freshly severed nerve is a very feeble structure but it thickens quickly after injury. It is justifiable at the primary operation to simply tack the nerve ends together with one catgut suture so that their exposure later may be more convenient. I need not enlarge on freshening the nerve ends with a sharp scalpel before suture or that the suture line must not be under any tension whatsoever.

Occasionally one encounters damaged or deficient circulation in the part. Vaso spasm may be relieved by sympathetic ganglion blocks, papaverine or priscoline. Rarely is it necessary to expose and excise a segment of damaged vessel.

A rough rule is that when two important structures are damaged, i.e., skin and bone or bone and nerve or bone and tendons, the part may be saved. Where all or most tissues are damaged, an amputation must be seriously considered. If the limb retains a normal sensory nerve supply, one should attempt to save it as this limb will likely be of more value than an artificial one.

Formerly it was recommended that all compound fractures should be kept wide open by packing with vaseline gauze. This practise was continued through the last war but then secondary suture of the wound, a week or so later, after the cultures were negative, was carried out. Civilian cases must not be compared or confused with war casualties. Stimson, at the Presbyterian Hospital, New York, since 1942, has carried out primary suture in one hundred cases without loss of life or limb. Similar large series are reported. This has been our practise, without regret.

A compound fracture with a small clear puncture wound that is treated early may be almost treated as a simple fracture. Grossly contaminated fractures probably should be drained with a penrose drain for several days if the wound is closed. Do not accept a mal-union in a compound fracture.

*Presented at Manitoba Medical College as part of the Faculty of Medicine Refresher Course, April, 1950.

Medico-Literary

J. C. Hossack, M.D., C.M. (Man.)

The Doctor in Spite of Himself

Lucinde, the daughter of M. Geronte, having no liking for her father's choice, suddenly became dumb when the date was fixed for her marriage. Other doctors having failed, Valere and Lucas went in search of a more skillful physician. On this mission they encountered Martine whose drunken husband, Sganarelle, had once been servant to a famous doctor, and who had a habit of beating his wife. At the time Martine was recovering from such a beating and when she heard the story of Valere and Lucas she saw a chance for revenge. Sganarelle, she said, was the man they wanted. He was wonderfully skillful but had the strange fancy of denying his profession and would take a case only after he had been soundly cudgelled. Lucas and Valere accordingly trounced him thoroughly until after many denials he admitted his power and his eccentricity. Further evidence of his eccentricity was given at M. Geronte's house where he beat the master and embraced the nurse.

Act I

(Enter Lucinde, Valere, Geronte, Lucas, Sganarelle and Jacqueline.

Sganarelle: Is this the patient?

Geronte: Yes. I have but one daughter; I should feel inexpressible grief were she to die.

Sganarelle: Don't let her do anything of the kind. She must not die without a doctor's prescription.

Geronte: You have made her laugh, monsieur.

Sganarelle: It is the best symptom in the world when the doctor makes his patient laugh. What sort of pain do you feel?

Lucinde (replies by signs, putting her hand to her mouth, to her head, and under her chin): Ha, hi, ho, ha!

Sganarelle (imitating her): Ha, hi, ho, ha! I don't understand you.

Geronte: That is what her complaint is, monsieur. She became dumb, without our being able to find out the cause. It is this accident which has made us put off the marriage. The man she is going to marry wishes to wait till she gets better.

Sganarelle: Who is the fool that does not want his wife to be dumb? Would to heaven that mine had that complaint! I would take good care she did not recover her speech.

Geronte: Well, monsieur, I beg of you to take all possible pains to cure her of this illness.

Sganarelle (to the patient): Let me feel your pulse. This tells me your daughter is dumb.

Geronte: Yes, monsieur, that is just what her illness is; you have found it out the very first time.

Sganarelle: We great doctors, we know things at once. An ignorant person would have been puzzled, and would have said to you: "It is this, it is that." But I was right the very first time. I tell you your daughter is dumb.

Geronte: But I should be very pleased if you could tell me how this happened.

Sganarelle: It is because she has lost her speech.

Geronte: But, please, what was the cause of the loss of speech?

Sganarelle: All our best authorities will tell you that it is an impediment in the action of her tongue.

Geronte: But, nevertheless, let us have your opinion on this impediment in the action of her tongue.

Sganarelle: I hold that this impediment in the action of her tongue is caused by certain humours, which among us learned men are called peccant humours. For as the vapours formed by the exhalations of the influences which arise in the region of complaints, coming—so to speak—to—Do you know Latin?

Geronte: In no sort of way.

Sganarelle (rising in astonishment): You don't know Latin?

Geronte: No.

Sganarelle (assuming various amusing attitudes): Singulariter, nominativo haec musa, "the muse," bonus, bona, bonum, Deus sanctus, estne oratio latenas? Quare? "Why?" Luia substantiae et adjectivum concordat in generi, numerum, et casus.

Geronte: Oh! Why did I not study?

Jacqueline: What a clever man he is!

Sganarelle: Thus these vapours of which I speak passing from the left side, where the liver is, to the right side where the heart is, it happens that the lungs, which we call in Latin armyan, having communication with the brain, which in Greek we name nasmus, by means of the vena cava, which we call in Hebrew cubile, in their way met the said vapours, which fill the ventricles of the omoplate; and as the said vapours—be sure you understand this argument, I beg you—and as these said vapours have a certain malignancy—listen carefully to this, I pray you.

Geronte: Yes.

Sganarelle: Are gifted with a certain malignancy which is caused—please pay attention . . .

Geronte: I am doing so.

Sganarelle: Which is caused by the acridity of the humour engendered in the concavity of the diaphragm, it happens that these vapours—Ossa-

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bundus, nequezs, nequer, potarinum, quipsa milus. That is just what makes your daughter dumb.

Geronte: No one, doubtless, could argue better. There is but one thing that puzzles me. It seems to me that you place the heart and liver differently from where they are; the heart is on the left side, and the liver on the right.

Sganarelle: Yes, that was so formerly; but we have changed all that, and nowadays we practice medicine by an entirely new method.

Geronte: I did not know that. I must ask you to pardon my ignorance.

Sganarelle: There is no harm done. You are not obliged to be as clever as we are.

Geronte: Certainly not. But what do you think, monsieur, ought to be done for this complaint?

Sganarelle: My advice is that she should be put to bed, and, for a remedy you must see that she takes plenty of bread soaked in wine.

Geronte: Why so, monsieur?

Sganarelle: Because in bread and wine mixed together there is a sympathetic virtue which causes speech. Don't you know that they give nothing else to parrots, and that they learn to speak by being fed on this diet?

Geronte: That is true. What a great man you are! Quick bring plenty of bread and wine.

Sganarelle: I shall come back at night to see how she is getting on.

Geronte: Just wait a moment, please.

Sganarelle: What do you want?

Geronte: To give you your fee, monsieur.

Sganarelle (holding out his hand from under his gown, while Geronte opens his purse): I shall not take it, monsieur.

Geronte: I beseech you.

Sganarelle: You are jesting.

Geronte: That is settled.

Sganarelle: I will not.

Geronte: What!

Sganarelle: I don't practice for money.

Geronte: I am sure you don't.

Sganarelle (after having taken the money): Is it good weight?

Geronte: Yes, monsieur.

Sganarelle: I am not a mercenary doctor.

Geronte: I know that.

Sganarelle: Self-interest is not my motive.

Geronte: I never for a moment thought it was.

Exit.

Act II

Lucinde was in love with Leandre who now approaches Sganarelle with a proposition. Her dumbness, he reveals, was merely a trick to get out of the marriage planned by her father. Sganarelle is offered a purse of gold to help the lovers and naturally he takes it. He introduces Leandre into the Geronte household as his apothecary. When Leandre suggests that it might be

well if Sganarelle were to tell him (Leandre) a few high sounding medical words the old man laughs and tells him that a physician's dress is all the disguise he needs. By now Sganarelle is enjoying his role of doctor. He is going to stick to physic for the rest of his life. There was nothing like it. No doctor bothered about his mistakes. Even a cobbler had to pay for the least bit of leather he spoiled but the physician could completely spoil a man and get paid for it. In fact when things went wrong it was never charged to the doctor's account; it was always the fault of the chap who persisted in dying.

(Enter Jacqueline, Lucinde, Geronte, Leandre and Sganarelle).

Jacqueline: Here's your daughter, monsieur. She wishes to walk a bit.

Sganarelle: It will do her good. Go to her, Mr. Apothecary, and feel her pulse, and I will consult with you presently about her malady. (At this point he draws Geronte to one side of the stage, puts one arm on his shoulders, places his hand under his chin, and makes him turn towards him, whenever Geronte wants to see what is going on between his daughter and the apothecary, while he holds the following discourse with him to keep his attention: Monsieur, it is a great and subtle question among doctors whether women are easier to cure than men. I beg you please listen to this. Some say "no," some say "yes." I say both "yes" and "no"; for as the incongruity of the opaque humours which are found in the natural temperament of women causes the animal side always to struggle for mastery over the spiritual, we find that the inequality of their opinion depends on the oblique motion of the circle of the moon; and as the sun . . .

Lucinde: No, I can never change my feelings.

Geronte: Hark! My daughter speaks! O the great virtue of physic! How deeply am I indebted to you, monsieur, for this marvellous cure!

Sganarelle (walking about the stage, wiping his forehead): It is a complaint that has given me much trouble.

Lucinde: Yes, father, I have recovered my speech; but I have recovered it only to tell you that I will never have any other husband than Leandre.

Geronte: But—

Lucinde: Nothing will shake the resolution I have taken.

Geronte: What—

Lucinde: All your excellent reasons will be in vain.

Geronte If—

Lucinde: All your talk will have no effect.

Geronte: I—

Lucinde: It is a subject on which I am quite determined.

Geronte: But—

Lucinde: No paternal power can force me to marry against my will.

Geronte: I have—

Lucinde: You can make every effort you like.

Geronte: It—

Lucinde: My heart cannot submit to such a tyranny.

Geronte: There—

Lucinde: And I will sooner throw myself into a convent than marry a man I don't love.

Geronte: But—

Lucinde (speaking in deafening tone of voice); It is no use. You waste your time. I will not do anything of the kind. I am resolved.

Geronte: Ah! What a wildness of speech! I beg you, monsieur, to make her dumb again.

Sganarelle: That is impossible. All that I can do for you is to make you deaf, if you like.

Geronte: You shall marry Horace this very evening.

Lucinde: I will sooner marry death.

Sganarelle: Let me take this disease in hand. It is a complaint that has got hold of her, and I know the remedy to apply.

Geronte: Is it possible that you can cure this mental malady also?

Sganarelle: Yes, let me manage it. I have remedies for everything, and our apothecary is the man for this cure. (He calls the apothecary, and speaks to him). You see that the passion she has for this Leandre is quite against the wishes of her father and that it is necessary to find a prompt remedy for the evil, which will only become worse by delay. For my part, I see but one remedy, a dose of purgative flight suitably mixed with two drachms of matrimony in pills. Go and take a little turn in the garden with her to prepare the

humours, while I talk here with her father; but, above all, lose no time. Apply the remedy at once—apply the specific remedy.

(Exeunt Leandre and Lucinde. Enter Lucas and Martine).

Lucas: Your daughter has run away with Leandre. He was the apothecary, and this is the doctor who has performed the operation.

Geronte: Quick, fetch the police, and prevent him from going off! Oh, traitor, I will have you punished by law.

Lucas: You shall hang for this, doctor! Don't stir a step from here! (Re-enter Leandre and Lucinde).

Leandre: Monsieur, I appear before you as Leandre, and to restore Lucinde to your authority. We intended to go off and to get married, but this undertaking has given place to a more honourable proceeding. It is only from your hands that I will receive Lucinde. I have to tell you, monsieur, that I have just received letters from which I learn that my uncle is dead, and that I am the heir to all his property.

Geronte: Monsieur, your virtue merits every consideration, and I give you my daughter with the greatest pleasure in the world.

Sganarelle: Physic has had a narrow escape.

Martine: Since you are not going to be hanged, you may thank me for making you a doctor. It was I who gained you that honour.

Sganarelle: I forgive you the beating because of the dignity to which you have raised me, but be prepared henceforth to show great respect towards a man of my consequence; and remember that a doctor's anger is more to be feared than folk imagine.

Moliere.

Scientific Papers for Annual Meeting

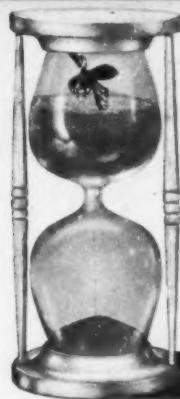
Any Practitioner in Manitoba who is desirous of presenting a paper to the Scientific Sessions at the Annual Meeting of the Manitoba Medical Association, which will be held in Winnipeg, October 2nd, 3rd, 4th and 5th, is herewith invited to notify the Chairman of the Scientific Programme Committee.

Further details of the programme will be announced in the next issue of the Review. C. E. Corrigan, M.D., Chairman.

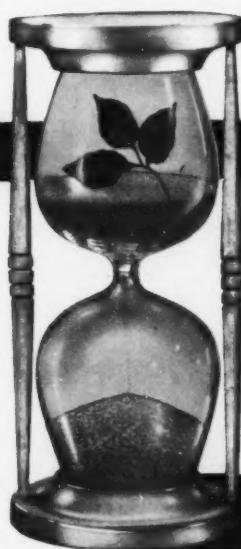
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EDITORIAL

J. C. Hossack, M.D., C.M. (Man.), Editor

The Flood

May was a very hectic month, the like of which none of us want to see again, but now the flood is already an old story to all except those who suffered from it. To them the return to what used to be homes must be disheartening. Ruined floors, mildewed walls, sodden, collapsed furniture, slime underfoot, stench in the nostrils and destruction wherever the eyes may rest—that, for hundreds of people will greet their home coming. The Fund for the rehabilitation of these victims of disaster has far to go to reach its objective. The minimum for our profession has been set at \$100,000 and that has not yet been reached. This sum is not to be used to help affected doctors but goes into the common fund—a fairer thing to do for many of the heaviest losers are far less able than ourselves to bear the loss. We are informed by those in charge that donations are not only still being accepted, but are being asked for. Further, if you wish, your donation to our fund will be credited to your local fund and vice versa. That is, if you have donated elsewhere and notify Dr. W. J. Boyd

(at 321 Medical Arts Building) of the fact, your name will be added to our list. If you have given to us and wish credit with your local fund, that too can be arranged. The Fund Committee is anxious to avoid any hint of pressure upon you. Not pressure from without but the pressure from within of gratitude or sympathy should be the only force employed.

* * *

When drowning suburbs and sacrificed homes showed the arrival of destruction it was feared that the destruction might become complete and that total evacuation might be necessary. Careful and comprehensive plans were laid for such an eventuality and in them our profession had a prominent place. A great deal was actually done by doctors in handling the situation as you will see elsewhere in this issue. Later we hope to give you from the pens of those chiefly responsible the story of our role as it was planned in the event of total disaster.

OBITUARIES**Dr. James Currie McMillan**

Dr. James Currie McMillan died on May 20 at Vancouver after a prolonged illness.

Succeeding Dr. W. L. Watt as radiologist to the Winnipeg General Hospital when Dr. Watt went overseas early in the First World War, Dr. McMillan served in that position for thirty years. He may justly be termed a pioneer in modern radiology.

Born in Minto, Man., he attended Brandon College and the University of Manitoba from which he graduated in Medicine in 1907. He then worked under Dr. Watt and in 1916 went overseas as adjutant of the 11th Canadian Field Ambulance. On his return he studied radiology in New York under Dr. Lewis Gregor Cole, then became director of the Dept. of Radiology at the Winnipeg General Hospital. His list of memberships in medical bodies is long: Fellow of the American College of Physicians (Canada), American College of Radiology, a charter member of the Canadian Associa-

tion of Radiologists, a life member of the Winnipeg Medical Society, and a past president of the Manitoba Medical Association.

He is survived by his widow, a son, two grandchildren, a sister and two brothers, J. H. and R. A. McMillan, both of Winnipeg.

Through his ability as a diagnostician and teacher and his gift for making friends he made a deep impress on medical circles in the Canadian west.

Dr. Benjamin A. Victor

Dr. Benjamin A. Victor, 58, died in Winnipeg on June 6 after a long illness. He graduated in 1919 and practised in Winnipeg.

Dr. Robert Sidney McMunn

Dr. Robert Sidney McMunn, 79, Manitoba Medical College, 1897, died on June 7.



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ASSOCIATION PAGE

Reported by M. T. Macfarland, M.D.

The Battle of The Manitoba Flood

This account is being written one month after the onset of one of the most devastating floods which has been witnessed in Manitoba. Waters which, two years ago, rose some five feet above the datum level established to 23.4 feet this year reached the level of 30.3 feet. Plenty of warnings of flood waters south of the 49th parallel reached us during the latter part of April, but it was not until the first of May that the first crest was reported at the border town of Emerson. Graphic accounts of the activities of the doctors in the southern areas reaching and attending patients under adverse conditions excited admiration as did those of the evacuation of the newly completed hospital at Morris. As the level of the Red River rose there was increasing concern for institutions located along the banks. St. Vital had been flooded and in the early morning of May 6th, after the dike protecting the Riverview area had given way it was necessary to evacuate the patients from King Edward, King George, and the new Princess Elizabeth Hospitals. On May 6th a state of emergency was declared by Premier D. L. Campbell, and the army under Brigadier R. E. A. Morton was given modified control. That same evening evacuation of patients from the St. Boniface Sanatorium began, and when traffic over the water-covered approach to the Norwood Bridge was restricted to necessary trips as opposed to sightseers, the 1 D series licence plate on the physician's car was accorded full recognition by the officers of the City Police Department. On Saturday, May 6th, and again on Sunday afternoon, May 7th, calls were received from the Red Cross Society asking what plans had been made to cope with emergency medical calls. On the morning of May 8th, the Command Medical Officer called together all the superintendents or administrative officers of all the hospitals of the Greater Winnipeg area to which the Executive Secretary-Registrar was also invited. At that time reports of voluntary curtailment of admissions and hastened discharges were reported, together with the evacuation of St. Boniface Hospital, and city nursing homes. It was agreed that admissions be restricted to emergency cases, and that bed states would be reported to the office of the Command Medical Officer, twice daily. On the evening of the same day a meeting of representatives of the major groups in the field of army medical services, hospitals, provincial and civic health departments, medical, nursing and dental associations were called together under Red Cross auspices to formulate emergency disaster

plans which might be required in the handling of evacuees, staffing trains, setting up first aid posts, arranging inoculation centres, etc. It was agreed that the medical profession should work in conjunction with the headquarters which were established in the Roller Skating Rink at the Auditorium and on the following day, May 9th, a letter was addressed over the signature of the President of the Winnipeg Medical Society requesting registration of members for voluntary duty. The written appeal was supplemented by radio broadcast and the response was excellent. The names of over two hundred members of the profession were rapidly secured, and many more were added throughout the week, while members of the profession accepted duty postings at any hour of day or night. Many were fully occupied at inoculation centres, while others were called up for service by the Army, Navy or Air Force. A roster was maintained on a twenty-four hour basis at headquarters, at each of the railway stations, and the evacuation centres. Doctors visited invalids or elderly persons whose names were added to evacuation lists as the danger mounted. Internes and students who had completed examinations rendered valuable service. During the week another master plan entitled "Blackboy" was prepared in the event that the flood waters continued to rise. Promulgation of such a plan would have been by Order-in-Council but the modified plan was inaugurated on a voluntary basis on May 14th, when joint lay and army directors were set up for various departments such as Medical Care and Personnel, Hospitalization, Evacuation, Sanitation and Public Health and Supplies under the overall charge of the Director of Medical Care, a Deputy, and a press liaison officer. This plan continued in operation with decreasing activity until the cessation of the emergency, when control was handed back to the civil authorities on May 29th. Meanwhile, the Manitoba Flood Relief Fund had been organized, and a special medical committee had been appointed to canvass the profession in an attempt to raise a sizeable sum. In a recital of this type it would be impossible to outline the names of all who contributed in one way or another to the Battle of the Flood, since it remains true that there is no limit to what may be accomplished provided no one is concerned who gets the credit. Hearty thanks are due to all who shared. The sympathetic interest of the profession is extended to its own members who were inconvenienced or who lost heavily as the result of the flood, as also it is to

others even less fortunate who may have less recuperative powers than our own members. It now remains for the City of Winnipeg and the Province of Manitoba to demonstrate the ability to recoup the losses and recover the enviable posi-

tion which was held prior to the setback. Various letters which were addressed to the profession during the month are reproduced in the Review for record purposes.

Letters Addressed to the Profession

Winnipeg Medical Society 604 Medical Arts Building Winnipeg

Telephone 922 707

May 9th, 1950.

To All Doctors in the City of Winnipeg

The City of Winnipeg is now in the throes of a major disaster, which will probably become worse.

At the present time medical help is required in caring for refugees and personnel engaged in fighting the floods. Many of the members of the Society have personal problems in connection with present conditions but many have already volunteered their services. **Many More Are Needed!**

Can you help? If so, you are requested to advise the office of the Winnipeg Medical Society the following information:

- (a) Can you devote full-time? or
- (b) Part-time, and what hours available?

Please telephone immediately to the Winnipeg Medical Society. **Telephone No. 922 707.**

T. E. Holland, M.D.,
President.
S. A. Boyd, M.D.,
Secretary.

Emergency and Disaster Committee for Medical and Nursing Care

Winnipeg,
May 11th, 1950.

To All Doctors in the City of Winnipeg

This committee represents the following agencies: The Armed Forces, the Department of Health for Manitoba, the Winnipeg City Health Department, the Manitoba Medical Association, the Manitoba Dental Association, the Manitoba Association of Registered Nurses, the Red Cross, the Winnipeg Medical Society, and the Manitoba Hospital Association.

For your information, the following method of handling emergency medical care has been developed:

(a) All doctors have been asked to register for voluntary part time or preferably full time service —you can phone either to the Manitoba Medical Association office at 922 707, or the Medical Desk in the Auditorium, 320, the Committee Headquarters.

(b) If telephone lines are cut off you are asked to spend some portion of each day or night at the

hospital nearest to your home so that you could be reached by messenger.

This letter is supplementary to the notice sent to you on the 9th instant and its purpose is two-fold:

(a) To urge upon each physician the importance of registering at once for as much time as he can spare in the event he is needed, also, advising the time of day he is most readily available.

(b) To advise you briefly of the organization set up to handle the medical and nursing problems of this crisis.

We have set up headquarters of this committee in the basement floor of the Auditorium and we work in close harmony with the Red Cross which has taken over this whole floor.

We have been exceedingly busy in organizing the evacuation teams required for getting the sick and helpless people out of the city to other institutions in this province and Saskatchewan—All nursing homes in Winnipeg have been evacuated from the city in the past 24 hours, and at present we are evacuating 400 to 500 from the St. Boniface Old Folks' Home—and nearly half of these are stretcher cases. 350 of these are going to Regina. The problems of non-medical evacuees, rural and local, are many, and take a sizeable part of the medical and nursing services available.

Only a few of our problems have been mentioned. Please register at once, if you have not already done so. We need full time medical men as well as a roster of part time doctors to be called on as the need arises.

There is an adequate number of beds available for the time being in all hospitals still operating, but changing conditions may alter this picture from time to time. These beds, of course, are for emergency cases only, and you are asked to satisfy yourself that the patient is in that category before requesting admission. This has been cleared with representatives of all hospitals.

A small number of infectious disease beds are available at the Children's Hospital, which should only be used if no other arrangements can be made.

Please do not request hospital accommodation in rural hospitals as the number of their available beds is reported to this committee, and allocations are being constantly made.

Faithfully yours,

Dr. Gordon S. Fahrni,
Chairman.

**Manitoba Flood Relief Fund
Medical Committee**

"He only lasts but does not live
Who much receives but does not give."

May 17th, 1950.

Dear Doctor:

You will be called upon in the next forty-eight hours by one of your colleagues representing the Medical Committee of the Manitoba Flood Relief Fund. He already has made a generous donation.

Please do not regard your contribution as charity. It is a sound investment in your community and gives you the opportunity to help your friends and fellow citizens. The many victims of the flood need help NOW.

The Income Tax Department permits a maximum deduction of ten per cent (10%) of your annual income for such purposes. It is respectfully suggested that, having made allowance for your usual charitable commitments, you donate at least the balance of the allowable 10% to this fund.

You can help your relatives, your friends and your neighbours more effectively through this fund than you can privately.

This is not charity. It is the most effective method to rehabilitate your community in which your interests are vested.

Please have your cheque ready.

Yours very truly,

P. H. T. Thorlakson, M.D.,

Chairman.

S. A. Boyd, M.D.,

Secretary.

Manitoba Flood Relief Fund

May 16, 1950.

National Committee

Chairman Mr. H. W. Manning

Secretary (Honorary) Mrs. Garnet Coulter

Treasurer (Honorary) Mr. M. A. O'Hara

Provincial Chairman Mr. Allen H. Watson

Medical Committee

Honorary Chairmen—Doctors D. L. Scott, Edward Johnson, J. Roy Martin, T. E. Holland, Lennox G. Bell.

Chairman Dr. P. H. T. Thorlakson

Secretary Dr. S. A. Boyd

Treasurer (Honorary) Dr. W. J. Boyd

Members—Other representatives of the Manitoba Medical Association, College of Physicians and Surgeons of Manitoba, General Practitioners' Association of Manitoba, and Winnipeg Medical Society.

Dear Doctor:

The medical profession of Manitoba has been requested to organize a campaign under the auspices of the Manitoba Flood Relief Committee to solicit funds from the members of the medical

profession of Manitoba for relief of the victims of the flood disaster.

The Dominion, Provincial and Municipal Governments and the Canadian Red Cross will be responsible for general reconstruction and repairs, whereas the purpose of this Special Flood Relief Fund is to assist families to replace their personal belongings and household effects which they have lost in this crisis and which cannot be covered from other sources.

The medical profession, like all other professions and organizations, has a great responsibility to those who have been so unfortunate. Our responsibility is two-fold, medical care and financial aid. You, doctor, must accept that obligation.

The Special Medical Committee met this morning and agreed unanimously that the medical profession of Manitoba must set its minimum objective for this fund at One Hundred Thousand Dollars (\$100,000.00).

To attain this, it will be necessary for you to give generously. A receipt of your donation will be forwarded to you and your contribution will be deductible for income tax purposes.

Please make your contribution, by cheque or money order, payable to the "Manitoba Flood Relief Fund" and send it addressed:

Manitoba Medical Association.

604 Medical Arts Building,

Winnipeg

with envelope marked—"ATTENTION: Manitoba Flood Relief Committee."

The need is URGENT! Your immediate and generous action is earnestly requested.

Yours very truly,

P. H. T. Thorlakson, M.D.,

Chairman.

S. A. Boyd, M.D.,

Secretary.

To the Members of the Medical Profession

Winnipeg, May 19th, 1950.

This letter, concerning the present flood situation, is sent to you at the direction of the joint Medical Committee of Emergency Flood Control.

It would be idle and undesirable to lead off this letter with any complimentary eulogy. We shall simply say: "Thank you, for your good work. It was expected and it was given, you have not failed."

The doctor, trying to make his daily rounds, hampered by bad roads, traffic blocks, and interference, may well feel irritated at the disruption of his normal hospital availability and routine. It has been impossible to inform all of you as to the reasons for what was done. The purpose of this letter is to present the actual picture, so that you will appreciate the existing situation.

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3

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When the flood began, it was seen as a seasonal occurrence, but this rapidly assumed the aspect of a major catastrophe. The government, as well as the individual, was deceived by first appearances. As the situation deteriorated, it became apparent that complete centralization of control was the only suitable expedient.

Large scale of evacuations from hospitals, nursing homes, and private homes became imperative. Transportation, housing and medical care were essential. Municipalities and the City were faced with reluctance on the part of citizens to relinquish their homes until the very last moment. There were two choices open: (a) to declare Martial Law or (b) to request the Military Authorities to act in aid of the Civil Power. The latter course, being the less drastic, was followed, and the legal difficulties were removed.

The various professional committees, which had operated in the first days of the emergency, continued to act as before, but now had the benefit and support of the Command Medical Officer, who was able to reflect the overall aspect of the flooding situation as evolved at Emergency Flood Headquarters of Brig. Morton.

It must be clearly understood that from the moment the Emergency Flood Control was established all hospitals and institutions were automatically bound by its decisions, unless willing to assume full responsibility for the unpredictable consequences. At no time was a decision made by the Armed Services respecting the profession, the hospitals, or medical institutions, without the full concurrence of the Committees set up by the profession at large.

With the flooding and elimination of the King George Hospital, the St. Boniface Hospital, and the King Edward Sanatorium, it became apparent that further emergency retrenchment in the matter of hospitals would have to be practised in advance of a worsening situation. The futility of awaiting further events was very obvious.

To make suitable preparations, the picture had to be assessed as a strategic one, with consideration of such factors as (1) availability of bridges; (2) availability of road, rail and air communications; (3) availability of heat, light and power; (4) the physical aspects of the ground with reference to relative heights above the datum river line. As a result of repeated conference, it was decided that, in view of the above factors, that the Winnipeg General Hospital would be considered the last line of defence before total evacuation of the city.

The Misericordia Hospital, Grace Hospital, and the Winnipeg General Hospital were to be kept open as long as possible, with the stipulation that none but genuine emergencies were to be admitted, because it was felt that at any moment a large influx of flood casualties, either from the city or outside points, might well be expected.

The evacuation of the aged and infirm presented a formidable problem, but, with the co-operation of the City and Provincial Health Departments, this was accomplished.

It was also obvious that a Civilian Ambulance Transport was totally inadequate to meet the large scale evacuations, and the R.C.A.M.C. was used. It operated magnificently. The experiences overseas bore good fruit, as patients were transported from hospitals to new locations. The Railway Companies placed their facilities at our disposal and adapted their routines to the rapidly changing and fluid situation. A full plan was prepared for the total evacuation of the Misericordia Hospital and the Grace Hospital, should the need arise. Deer Lodge Hospital absorbed a great many patients and was instrumental in dealing with tuberculous patients, as well as the aged and infirm group, facilitating the transmission of the aged and infirm to outlying points, where they became the responsibility of the rural hospitals. The medical implications of the move were assumed by the rural members of the profession.

The Children's Hospital, although gravely threatened, carried on paediatric out-patient department, paediatric casualty department, infectious diseases and inoculations. The Red Cross Lodge at Deer Lodge Hospital also preserved the continuity of paediatric services. The possibility of paediatric and infectious diseases has presented a potentially grim picture which, to date, has not materialized, but the danger there is by no means over.

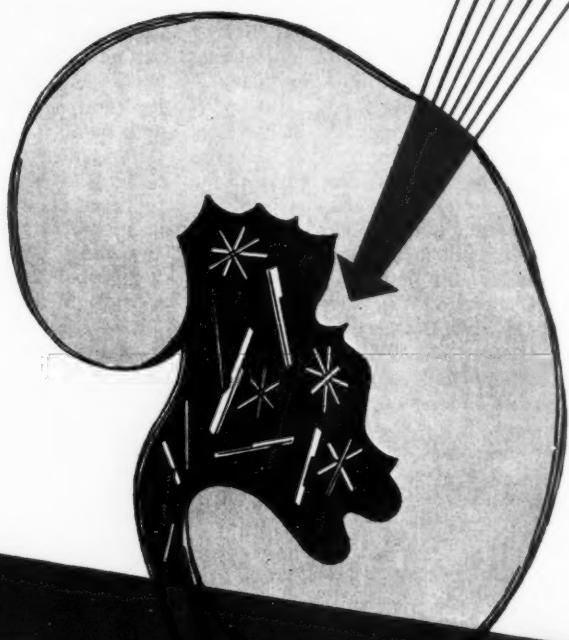
The Victoria Hospital, being south of the Assiniboine, was considered a hazard should further high levels be reached by the river, and was, therefore, evacuated. St. Joseph's Hospital was reduced to a bed state of four, but continued to carry on inoculations and minor casualty services.

After repeated daily assessment, it became apparent that there existed a group of dangerously ill patients, whose lives would be gravely threatened by any transportation. They were left in the city and their removal was only contemplated as a very last resource.

This letter is but a bare outline of the picture and in no way indicates the multitude of difficulties which arose in the implementation of the plan. It was only by the splendid co-operation of the Red Cross, the Armed Services, the Medical and Nursing Professions, and the Citizens of Winnipeg, that the whole scheme did not break down completely.

If mistakes were made, as they always are by humans, they were indeed minor ones, when considered in the light of the gravity of the situation. You must bear in mind that the experts were completely unable to give us a prognosis as to the behaviour of the river, or of the great dikes thrown up in haste to stem its advance. For some days,

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it was thought that the entire power supply would be cut off, and the care of all patients in Winnipeg depended on this and the energies of the dike workers. Engineers and Army personnel were concentrated for a time on the saving of the Power Stations. They demanded that our arrangements be based upon a diminished power, heat, and light supply. Heavy pumps were extremely limited in numbers and a similar concentration of pumps was planned for the saving and maintenance of the Winnipeg General Hospital, in the event of defeat at the doors of Grace and Misericordia Hospitals. We shall emphatically state to the members of the medical profession that any disruption in their personal professional routine was, in this emergency, reduced to a minimum, and should be borne with equanimity. Moreover, the situation, though static at the moment, is still fraught with grave potential dangers, and the rehabilitation picture becomes increasingly apparent as one requiring the most rigid control with very gradual relaxation. You may be assured that your committees will keep in mind the importance of an early expeditious return to the status quo. We would earnestly request that you do not join the ranks of the carping critics. Any constructive suggestions that you may have will be thankfully received by this your Association, if made in writing, and, to the best of the ability of your committees, they will be faithfully applied.

(Signed) Athol Gordon, M.D.

(Signed) D. L. Scott, M.D.

(Signed) M. T. Macfarland, M.D.

**Manitoba Flood Relief Fund
Medical Committee**
604 Medical Arts Building,
Winnipeg, May 23rd, 1950.

Dear Doctor:

One week ago the people of Manitoba organized a campaign in support of the Manitoba Flood Relief Fund. Through this Fund, people in Manitoba and Canada have an opportunity to extend a helping hand to the victims of the flood disaster. This assistance is direct, and in addition to any aid from Government sources, this is a challenge to private enterprise and to individual generosity. The monies received into this special Fund will be used for household effects and personal belongings — items that will not be covered by monies from Government sources.

Some members of the profession have asked questions about the management of the Fund: Will there be a means test? Will this Fund relieve the Governments of their obligations? etc.

The answer to the first question is that no one knows the extent of the loss or the amount of monies that will be available for distribution through this Fund. The manner of distribution

will depend upon the need and the amount available. Mr. H. W. Manning, the Chairman of the National Committee, assured a representative of the Medical Committee that a policy of disbursal would be made public as soon as possible. The only immediate and effective answer to the first question is to give generously.

To the second question, one can only say that the magnitude of the disaster demands a total effort by everyone, both directly by a personal contribution, and indirectly through his Governments. It is inconceivable that our Governments will not do everything within their power to repair the damages and prevent a recurrence of one of the greatest disasters that any single community of Canada has faced. After the 750 members of the medical profession have contributed and reached the minimum objective of \$100,000.00 (which by every yardstick is a conservative contribution in relation to the total need), then we will not only be in a position to assist, but also to advise in the distribution of the Fund.

Be assured that the persons in charge of this campaign and those responsible for the final distribution of the Fund are just as anxious as you and we are that everything will be done to repair the damages and re-establish families in their homes.

The letters from the Medical Committee go to every doctor in the Province registered with the Manitoba College of Physicians and Surgeons. You may be a flood victim. No one at this time can assess losses or individual needs. One flood victim was annoyed because he was not asked for a donation; he gave generously. The damage to his home is extensive. His loss is serious in proportion to his income; he is on salary. His example should be an incentive to those of us who have suffered no damage, or have only some polluted water in our basements.

Many of our citizens, and that includes many of us, do not appreciate the magnitude of the damage created by this disaster. His Worship Mayor Hiram McCallum of Toronto has personally viewed the havoc and his published impressions aptly reflect the seriousness of the situation—"Devastating, completely devastating"—"Nothing so completely destructive has occurred within the known history of Canada as this envelopment of the Red River Valley."

He has taken up the crusade for us with these words:

"You can tell the people of Canada for me, from my personal first-hand knowledge, that everyone of us is going to have to get behind the Manitoba Flood Relief Fund and lend a more-than-generous hand in the rehabilitating of the thousands on thousands of people totally hit by this catastrophe . . . the thousands of farmers com-

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- (1) Tainter, M. L.: Proc. Soc. Exper. Biol. & Med., 54:77 (1943)
(2) Schweiß, K.: N.Y. State J. Med., 48, 1822 (1948)



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pletely flooded out along the 60-mile sweep of the Red from Emerson to Winnipeg and beyond . . . the homes totally destroyed . . . the appalling disruption of whole communities . . . the old folk . . . the veterans who put up their last penny to establish themselves."

Thus, Canadians from a distance are coming to our aid and giving generously. Citizens of Manitoba accept this assistance with gratitude. They have helped us; let us help ourselves by contributing generously to this Fund.

1. If you have not forwarded your donation, please do so now.

2. If you have already sent in your donation, we thank you.

3. In reviewing your contribution in relation to the seriousness of the disaster and your means, if you think you can increase your bestowal, a further donation will be gratefully received.

Yours very truly,

D. L. Scott, M.D., President,
Manitoba Medical Association.

Edward Johnson, M.D., President,
College of Physicians and Surgeons
of Manitoba.

T. E. Holland, M.D., President,
Winnipeg Medical Society.

Roy Martin, M.D., President,
General Practitioners Association of
Manitoba.

Lennox G. Bell, M.D.,
Dean, Faculty of Medicine, University
of Manitoba.

♦

Health Survey Committee

At the first meeting of the Health Survey Committee, which was held in the Marlborough Hotel, on February 24th, three general committees were set up to consider general health care, medical care, and hospital and nursing care. Members of the Health Survey Committee were allotted to one or other of the three committees, but it is anticipated that the larger amount of the actual work of securing and correlating the available information will be carried out by the full-time staff of the Department of Health and Public Welfare, under the general direction of Dr. M. R. Elliott. At a recent meeting of the Executive Committee, Dr. Elliott outlined some of the anticipated projects in connection with the medical care survey. He requested and was assured of the interest and the co-operation of the Association in the preparation of a questionnaire, which will be circulated to every doctor of the province, seeking informa-

tion which is essential to the survey. After perusal of the form which the questionnaire should take, it will be sent to all members of the profession by the Department of Health and Public Welfare. Where necessary, supplementary field visits will be made during the summer by members of the survey teams. All members of the Association are requested to co-operate to the fullest possible degree, in order that the percentage response to the questionnaire may equal or exceed the upper limit reached by any of the other provinces. If there is additional material of a confidential nature which should be included in the Survey, any remarks which you may direct to the Association office will be greatly appreciated.

Hospitalization of Non-Entitled Veterans in Department of Veterans' Affairs Hospitals

On Monday, March 13th, the Minister of Veterans' Affairs tabled in the House of Commons, Order-in-Council B.C. 1266, dated March 10th, 1950, permitting the D.V.A. to provide hospitalization and treatment for veterans who are ineligible under existing regulations. The Minister described the new class as "those who are covered as to hospital cost by private or provincial government insurance plans; or who, though not insured, have the means to pay for the treatment for which they may apply at D.V.A. hospitals." It is understood that a per diem hospitalization rate of Eight Dollars and Sixty-five Cents (\$8.65) has been set, but **this rate does not include medical care**, the cost of which will be an additional charge on the veteran. Details of the manner in which the doctors would be paid have not yet been made available, but, presumably, on admission of a non-entitled veteran to a D.V.A. Hospital, he will be assigned to one member or more of the regular or part-time medical staff of the hospital. In this way, he may or may not be able to exercise free choice of doctor —one principle on which the profession has, over the years, laid considerable emphasis. Since the plan is new, and various details will have to be worked out, a movement has been recommended whereby the medical staff of each D.V.A. Hospital in Canada name three representatives to act with three representatives of the appropriate local medical group as a Committee to study the working of the new arrangement. Since the chief D.V.A. Hospital located in this district is Deer Lodge Hospital, Winnipeg, the Winnipeg Medical Society has been asked to name the three representatives, and the Association will await with interest any report received from this group prior to the Annual Meeting of the Canadian Medical Association at Halifax in June.

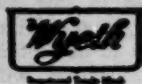


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SOCIAL NEWS

Reported by K. Borthwick-Leslie, M.D.

May my sins of omission be dumped in the lap of the Red River please? I'm afraid that for about three weeks I was too busy and too tired to do much about keeping abreast of the Society Notes, but to those of us who were submerged, or partially so, my sincere sympathy. What a mess the cleaning up is.

Of interest to the /44 Grads and staff of the General Hospital /46 is the appointment of W. B. Leach as Director of Pathology, Royal Alexandra Hospital, Edmonton, as of July, 1950. Dr. Leach has just completed three years of work associated with McGill University, Institute of Pathology, Queen's University, and as Assistant Professor of Pathology, University of Ottawa. Thank you, Dr. Leach, and sincere good wishes.

Mrs. W. M. Barrett with her son, Douglas, spent some time visiting her mother, Mrs. Gordon Chown, Wellington Crescent. How Dr. Gordon Chown would have enjoyed that grandchild, and he does look a "grand child."

"Gisele" La Fleche was wonderful here as guest star in the Associated Travellers Amateur Show, but even more so on the nation wide radio show in aid of our flood victims.

Congratulations to Lt.-Col. F. Hartley Smith, R.C.A.M.C., on his recently announced award of the Canadian Efficiency Decoration by the Dept. of National Defence.

This I cannot resist "but I do hope that it has been noted that even the Free Press is not fool proof when it comes to "Proof" reading. I have never seen a McRae look more like a Morse."

Dr. M. G. Elliott was elected president of the Portage la Prairie Junior Chamber of Commerce.

Dr. Bruce Chown, Professor of Pediatrics, U. of M., spoke on "Rh Sensitization" at the International Congress of Obstetrics and Gynaecology in New York early in May. It was the first International meeting of specialists in this field to be held in the U.S.A.

On June 3 Mrs. Dorothy G. MacLean became the bride of Dr. Charles Daniel Lees. The bride is the daughter of the late Major and Mrs. J. P. Oliver, the groom the son of C. A. M. Lees and the late Mrs. Lees. Dr. and Mrs. Lees will reside at Oak River, Man.

June 3, in St. Ignatius Church, Eileen St. Mars exchanged wedding vows with Dr. Terence Patrick Lalor. Dr. Frank Swartzlander was best man and Dr. Fred Duval assisted as usher. Dr. and Mrs. Lalor motored to the Laurentians, and will reside in the Verona Apts., Winnipeg. Dr. Lalor is a /50 Graduate in Medicine, U. of M. Mrs. Lalor is a graduate in Home Economics.

Dr. and Mrs. W. C. Hodgins announce the engagement of their daughter, Barbara, to Joseph Sinnott. The wedding is to be June 24th in St. Alphonsus Church.

The engagement of Margaret, daughter of Mrs. MacDougall and the late Dr. Dan MacDougall, to Wilmer Charles Langford of Powasson, Ont., is announced. The wedding will be June 24th in Knox United Church.

Mr. and Mrs. J. F. Baldner announce the engagement of Shirley Louise to John Stewart McInnes, son of Dr. and Mrs. J. S. McInnes. The wedding will be in St. Andrews United Church, June 28th, at 5 p.m.

The engagement of Mary Ethel, daughter of Dr. and Mrs. A. M. McFarlane, to Albert Charles Hamilton, son of Mr. and Mrs. G. F. Hamilton, Winnipeg. The wedding will take place July 3, in Cambridge, England.

Dr. and Mrs. Gordon Hunter announce the arrival of Ruth Ellen on May 10th.

Dr. and Mrs. Douglas Annett announce the birth of their second son, James Douglas, May 5th, in Chatham, Ont.

Dr. and Mrs. S. S. Toni of Altona, Man., announce the arrival of Stephen Junior, April 21st, in Altona Hospital.

I keep wondering who the lady Medico is, who was thoroughly stuck in the mud early in the muddy days or nights. One of my junior fans to the rescue enquired as to whether she knew me, and was snootily informed, "Well, yes, but she is so much older than I, we of course are not intimate." Lady, you will never know how close you came to being pushed back in that ditch. My pal was annoyed, to some people a good friend is "ageless."

(Continued on Page 407)



GE Service in a "pinch"

It could happen to you; that "now-what-have-I-done" feeling that raced through the GE salesman's mind as the Lynchburg, Virginia, officer curbed him with screaming siren.

But read the story behind it. An emergency service call came in from Lynchburg to the Richmond office. The GE salesman in that area was enroute to take care of a previous call which took him through Lynchburg. GE immediately phoned the Chief of Police in Lynchburg and enlisted his cooperation in stopping the salesman as he entered town. Needless to add, emergency service was soon effected and a Lynchburg hospital's X-ray equipment was back in service in minutes!

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Social News (Cont.)

Dr. and Mrs. W. H. Peake, Transcona, returned from a holiday on the Pacific Coast, just in time to take part in all the medical work involved in the "Flood."

♦
Dr. G. S. Fahrni was appointed first Vice-President of the Manitoba Division of the Canadian Red Cross, and what a job he was let in for! Congratulations, Dr. Fahrni, both on the honor bestowed and the excellent performance.

♦
The wedding of Heather June Carlyle to Dr. Robert Allen Laidlaw took place May 10th in St. George's Anglican Church. After an informal reception at the home of the bride's parents, Dr. and Mrs. Laidlaw left by motor for Richmond, Virginia.

♦
St. Aidan's Church was the scene of the wedding of Margot Joan Ellacott to Dr. Robert Thomas Ross, May 27th. Dr. Walter Fox was groomsman and Drs. Duncan Govan and Rueben Cherniak were ushers. Dr. and Mrs. Ross left for Montreal and will sail aboard the Ascania for England where Dr. Ross, a /48 graduate, will continue his studies.

♦
Dr. and Mrs. Wm. Bowman announce the birth of Wm. Paul Bowman, April 28th.

♦
Dr. and Mrs. N. P. Merkeley are happy to announce the arrival of Peter James, baby brother for Susan and Paul. Three Kings and two Queens make a full house!

◆
**"A Canadian Health Program
What Are the Issues?"**

Attention is drawn to the article by Malcolm G. Taylor, M.A., Ph.D., Director of Research of the Saskatchewan Health Services Planning Commission, which appeared under the Medical Economics of the April, 1950, number of the Canadian Medical Association Journal, Page 393. A criticism of the added section on Compulsory Medical Care Insurance by Dr. G. G. Ferguson, Registrar, College of Physicians and Surgeons of Saskatchewan, appears on page 409 of the same issue and should be read in conjunction with Dr. Taylor's article.

Opportunities for Medical Practice

Listed below are various places in Manitoba where a doctor has formerly been located, or where individual people of the district, local authorities, or the provincial Department of Health and Public Welfare would like to have a physician established. It is recognized that all may not be equally desirable, but the town or village name, rural municipality in which located, and type of practice where known, have been inserted.

Town or Village:	Municipality:	Nature—Private or Municipal:
Angusville	Silver Creek	Municipal
Bowsman	Minitonas	Private or ? Mun.
Elgin	Whitewater	Municipal
Elphinstone	Strathclair	Municipal
Foxwarren	Birtle	Private
Glenella	Glenella	Private or ? Mun.
Langruth	Lakeview	Private or ? Mun.
Letellier	Montcalm	Private or ? Mun.
Libau	St. Clements	Private or ? Mun.
Lorette	Tache	Private
MacGregor	North Norfolk	Private
Minota	Minota	Private
Minitonas	Minitonas	Private or ? Mun.
McAuley	Archie	Private or ? Mun.
Newdale	Harrison	Municipal
Oak Lake	Sifton	Private
Ochre River	Ochre River	Private or ? Mun.
Plumas	Westbourne	Private or ? Mun.
Sandy Lake	Harrison	Private or ? Mun.
Sperling	Morris	Private or ? Mun.
Ste. Agathe	Ritchot	Private or ? Mun.
St. Claude	Grey	Private
Starbuck	Macdonald	Private or ? Mun.
Tilston	Albert	Private or ? Mun.

In addition to the above, openings are available as follows:

Assistantship with British Columbia Group.
Assistantship with Ontario group.
Assistantship with Saskatchewan group.
Mining Doctor—British Columbia.
Equipped Office—Winnipeg.

Additional information may be secured by contacting the Executive Secretary-Registrar at 604 Medical Arts Building. Phone 922 707.



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Neutrabase is a water soluble ointment base intended for use in the extemporaneous preparation of prescribed ointments. Neutrabase is compatible with a very wide range of medicaments, and can be worked easily on a slab or in a mortar.

Control **V 84211**

THE E.B. SHUTTLEWORTH CHEMICAL COMPANY, LIMITED
TORONTO, CANADA

application:

Unlike the paraffin bases, NEUTRABASE E.B.S. is water-soluble and readily *dissolves* in wound exudate, thus releasing the medication to the wounded tissues. Furthermore, NEUTRABASE E.B.S. is easily removed in a stream of running water.

Due to its wide compatibility the physician may prescribe NEUTRABASE E.B.S. as a base for such drugs as Ammoniated Mercury, Benzocain, Boric Acid, Resorcinol, Sulphur, Tar, Zinc oxide, and many others.*

Physical properties of neutrabase

E.B.S.

1. It is pure white in colour.
2. It is water-soluble.
3. It is neutral in reaction.
4. It is compatible with a wide range of medicaments.

availability:

NEUTRABASE E.B.S. is packaged in four ounce, one pound and five pound containers.

*The E.B.S. laboratory invites enquiries regarding special formulations in NEUTRABASE E.B.S.

THE E.B. SHUTTLEWORTH CHEMICAL CO. LTD., TORONTO, CANADA
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Department of Health and Public Welfare
Comparisons Communicable Diseases — Manitoba (Whites and Indians)

DISEASES	1949		1948		Total	
	Mar. 26 to Apr. 22, '50	Feb. 26 to Mar. 25, '50	Mar. 27 to Apr. 23, '49	Feb. 27 to Mar. 26, '49	Jan. 1 to Apr. 22, '50	Jan. 2 to Apr. 23, '49
Anterior Poliomyelitis	0	0	3	0	2	3
Chickenpox	120	130	86	147	592	530
Diphtheria	1	0	2	1	4	11
Diphtheria Carriers	0	0	0	0	0	2
Dysentery—Amoebic	0	1	0	0	1	0
Dysentery—Bacillary	1	7	0	2	13	4
Erysipelas	7	7	3	5	23	12
Encephalitis	0	0	0	0	0	0
Influenza	29	25	31	27	63	73
Measles	213	60	636	828	541	2525
Measles—German	1	0	2	2	2	9
Meningococcal Meningitis	0	2	3	4	7	8
Mumps	32	31	115	220	138	635
Ophthalmia Neonatorum	0	0	0	0	0	0
Pneumonia—Lobar	21	30	36	28	69	80
Puerperal Fever	0	2	0	0	2	1
Scarlet Fever	33	41	3	6	167	39
Septic Sore Throat	3	4	4	5	16	13
Smallpox	0	0	0	0	0	0
Tetanus	0	0	0	0	0	0
Trachoma	0	0	0	0	0	0
Tuberculosis	86	86	59	56	263	174
Typhoid Fever	0	0	0	3	0	3
Typhoid Paratyphoid	0	0	0	0	0	0
Typhoid Carriers	0	0	0	1	1	1
Undulant Fever	6	3	1	3	9	6
Whooping Cough	23	17	23	26	66	79
Gonorrhoea	89	94	105	106	357	402
Syphilis	19	16	24	43	78	144
Diarrhoea and Enteritis, under 1 yr.	8	16	16	16	40	45

For Four-Week Period March 26 to April 22, 1950

DISEASES (White Cases Only)	*779,000 Manitoba	*861,000 Saskatchewan	*3,825,000 Ontario	*2,962,000 Minnesota
*Approximate population.				
Anterior Poliomyelitis	—	—	1	1
Chickenpox	120	65	877	—
Diarrhoea and Enteritis	8	—	—	—
Diphtheria	1	4	1	4
Diphtheria Carriers	—	1	—	—
Dysentery—Amoebic	—	—	1	5
Bacillary	1	—	7	1
Encephalitis Epidemica	—	—	1	—
Erysipelas	7	—	4	—
Influenza	29	—	299	74
Jaundice, Infectious	—	—	35	—
Measles	218	180	2074	433
Measles, German	1	229	3484	—
Meningitis Meningococcal	—	—	1	12
Mumps	32	261	1793	—
Pneumonia, Lobar	21	—	—	—
Scarlet Fever	33	34	106	102
Septic Sore Throat	3	2	12	12
Tuberculosis	86	46	121	85
Typhoid Fever	—	2	2	1
Undulant Fever	6	2	2	20
Whooping Cough	23	4	171	167
Gonorrhoea	89	—	148	—
Syphilis	19	—	81	—

DEATHS FROM REPORTABLE DISEASES

For Month of April, 1950

Urban—Cancer, 42; Influenza, 2; Pneumonia Lobar (108, 107, 109); Pneumonia (other forms), 8; Pneumonia of newborn, 2; Syphilis, 1; Tuberculosis, 10; Hydatid Disease, 1; Gastro-Enteritis, 1; Other Viruses, 1; Lymphosarcoma, 3. Other deaths under 1 year, 21. Other deaths over 1 year, 235. Stillbirths, 21. Total, 277.

Rural—Cancer, 24; Influenza, 7; Measles, 1; Pneumonia Lobar (108, 107, 109, 1); Pneumonia (other forms), 17; Syphilis, 1; Tuberculosis, 12; Gastro-Enteritis, 5; Meningococcal Infection, 1; Other Viruses, 1. Other deaths under 1 year, 18. Other deaths over 1 year, 208. Stillbirths, 14. Total, 240.

Indians—Measles, 1; Pneumonia (other forms), 4; Pneumonia of newborn, 1; Tuberculosis, 2. Other deaths under 1 year, 6. Other deaths over 1 year, 12. Stillbirths, 4. Total, 22.

Comment

It is of particular interest to note there has been no unusual incidence of disease in Manitoba during the present flood crisis. Even in flooded areas there appears to be no evidence of epidemics. Due to the efforts of all the health officers and practicing physicians the public has been well informed of health hazards which might accompany such complete inundation and credit must be given not only to members of the profession but to all residents of flooded areas for their splendid co-operation which has resulted in the clean bill of health thus far achieved.

Manitoba is fortunate at this time as regards Typhoid Fever, as not one single case has been reported from the flooded section. Nevertheless, as an added precautionary measure, the Department has advised immunization against typhoid for those who were in contact with the heavily contaminated flooded water. The response has been gratifying. Up to May 25th sufficient vaccine has been distributed for the complete immunization of one hundred and twenty five thousand persons.



Rapid, sustained relief follows topical application
of CALADRYL—the soothing new calamine-type
antipruritic lotion containing BENADRYL®

CALADRYL

TRADE MARK

effective: CALADRYL effectively relieves sunburn and itching. Benadryl hydrochloride (1%), calamine, camphor, glycerin and other ingredients are blended in a soothing lotion for effective antihistaminic and antipruritic action.

pleasant: CALADRYL is pleasant to use. Faintly perfumed, its light flesh color is cosmetically inconspicuous. It does not rub off but washes off easily.

versatile: CALADRYL has many uses. It soothes sunburn's itching and burning. Prickly heat, diaper and cosmetic rash are readily relieved as is the itch associated with hives, insect bites, poison oak, poison ivy, measles, chicken pox, contact dermatitis, and minor skin afflictions.

PARKE, DAVIS & COMPANY



COLLEGE OF PHYSICIANS AND SURGEONS OF MANITOBA

Business Arising from Minutes of Executive Committee Meeting Held November 29, 1949

(Continued from May Issue)

The Registrar was requested to acquaint Dr. Williams with the action of the Senate, and to request Mr. Chevrier to advise the Registrar's office of the dates of future meetings of the Committee on Selection.

6. Cancer Institute

The Registrar stated that the report was of negative nature. The last meeting of the full Board met in December, at which time they had before them the plan proposed by the Board, and the alternate proposal of the M.M.A., which was simply an outline in skeleton form upon which the Board was asked to complete details and refer again to the Association. No definite action has been taken concerning these two plans, but a committee was appointed by the Chairman of the Board to meet with representatives of the Executive Committee of the Association. The talks to-date have not been too encouraging, but meetings are continuing.

7. Canadian Arthritis and Rheumatism Society, Manitoba Division

For information of the Committee, the Registrar reported that a meeting was held February 2nd, concerning the organization of a provincial division with Mr. Ralph Baker as Chairman and Mr. H. H. Hanson as Treasurer. A drive for funds will take place about the first week in May.

B. New Business

1. By-Election in Portage la Prairie

Constituency

The Chairman advised that the death of the member of Council, Dr. A. A. Alford, Oakville, left a vacancy in the constituency of Portage la Prairie.

Motion: "THAT the Registrar arrange for a by-election in the constituency of Portage la Prairie." Carried.

2. Education Committee

The Registrar pointed out that since Dr. Alford was Chairman of the Education Committee it would be necessary to name a member to act until the May meeting of Council. The President, Dr. Ed. Johnson, was appointed to act as Chairman pro tem.

Specialist Register

The Registrar stated that the question of a specialist registrar was referred by Council for study to the Education Committee. He presented a communication from the Medical Board of

Western Australia, listing the specialties recognized by their Board, and requesting the list of higher degrees granted by the College. A reply was sent by the Registrar, indicating that no higher degrees or diplomas are granted by this College nor is a specialist register maintained in this Province.

Basic Licence

The Registrar stated that the question of a Basic Licence was referred by Council for study to the Education Committee. He said that Dr. L. G. Bell, Dean of Medicine, had advised that the University of Manitoba would be appointing a committee to consider the Basic Licence, and suggested that since the C.P. & S. would be considering it, a joint committee should be formed. The Committee considered the President should study this matter, and call a meeting when desirable.

3. Discipline Committee

Since Dr. Alford was Chairman of the Discipline Committee, the Registrar inquired whether a member should be named to act until the May meeting of Council. The Committee had been requested by Council to look into the matter of disciplinary proceedings and to draw up a system of suspension and/or fines to cover misdemeanors which require more than reprimand and less than erasure. The President, Dr. Ed. Johnson, was appointed to act as Chairman pro tem.

4. Liaison Committee

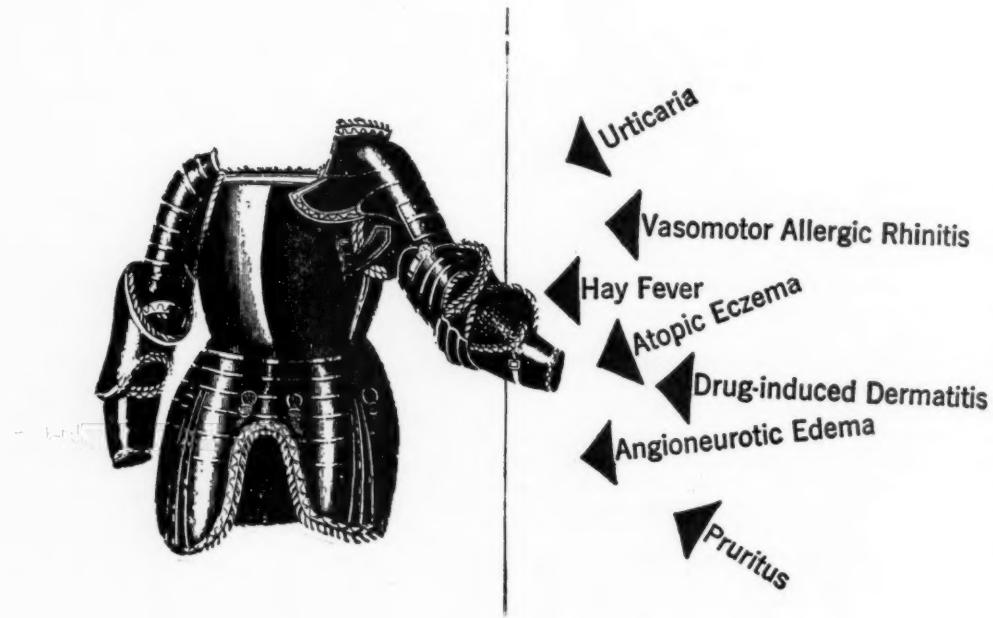
The President stated that a meeting of the Liaison Committee had been held on Sunday, February 19th.

Fidelity Bond

The Registrar reported that the M.M.A. had taken out a Fidelity Bond covering all five employees in the Association office, and an inside and outside burglary policy. The total cost for three years came to \$87.50, and the Executive of the M.M.A. asked that the Liaison Committee inquire whether the C.P. & S. was willing to share the payments on a pro rata basis. He reported that the College had two small policies. A Fidelity Bond of \$2,000.00 on the Treasurer and \$1,000.00 on the Registrar, and a burglary policy of \$500.00 outside burglary, \$500.00 inside burglary, and \$500.00 breakage of safe. Since the College safe did not conform to the type outlined in the policy, the representative of the insurance company examined it and was of the opinion that it was not covered by the policy.

Dr. Johnson stated that the Liaison Committee discussed the question of the C.P. & S. accepting a pro rata portion of the premium of the Fidelity Bond and Burglary Policy taken out by the M.M.A. to cover all employees of the combined business

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DIATRIN* hydrochloride 'Warner' is available in sugar-coated oral tablets, 50 mg. each—bottles of 100 and 1,000.

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*Trade Mark

office. He explained that the W.M.S. were paying \$12.50, the actual amount to cover the one employee looking after the W.M.S. business, plus 1/3 share of the inside and outside burglary coverage, \$8.33, making a total of \$20.83. The Liaison Committee also advised that the present agreement between the C.P. & S. and M.M.A. be revised so that all items such as secretarial help, light, rent, phone and insurance premiums be included.

Motion: "THAT the C.P. & S. pay to the M.M.A. the sum of Twenty Dollars and Eighty-three Cents (\$20.83) as their share on a pro rata basis of the Fidelity Bond and Burglary Policy." Carried.

With regard to the small burglary policy which the C.P. & S. has, and which does not cover the type of safe owned by the College, the Committee agreed that it should be kept in force until the premium expires, at which time the policy should be cancelled.

Canadian Medical Protective Association

The Registrar reported that the question of appointment of Manitoba members to act as representatives of the Canadian Medical Protective Association was discussed by the Liaison Committee. A report had been received from Dr. Fisher that the C.M.P.A. had given up the idea of changing their Manitoba Provincial Executive. It was considered that nomination of members to Provincial Administration Board should be a function of the Manitoba Medical Association.

Registrars' Meeting in Halifax

In the event that the Registrars' Conference is held at Halifax in conjunction with the Canadian Medical Association Convention, the Liaison Committee recommended that the Registrar be sent with expenses paid by the College.

M.M.A. Not Granting Membership to Unlicensed Doctors

The Liaison Committee referred to the C.P. & S. Executive the question of unlicensed members of the M.M.A.

The Registrar reported that the M.M.A. Membership Committee met to consider classification of the Association. This matter came up in regard to Membership-at-Large of the C.M.A. The principle of the C.M.A. is to refer such matters to the local division as to whether or not they should grant membership-at-large to doctors living in a province who are not licensed.

Dr. Johnson stated that the Membership Committee's recommendation to the M.M.A. was that no one would be suggested for membership-at-large in the C.M.A. who was not licensed to practise, and the Membership Committee was of the opinion that the C.P. & S. should give some further study to the problem and make inquiries and recommend that members who are employed by D.V.A. or armed services be required to be at least temporarily licensed.

Since the Registration Committee had under consideration the question of unlicensed physicians in the Province, the matter was referred to them to finalize and see what action should be recommended, and the recommendations of the Membership Committee be brought before the next meeting of the Executive, to tie the two together.

5. Illegal Use of Registration Certificate

For information of the Committee, the Registrar presented correspondence with the United States Civil Service Commission, Seattle, Washington, advising that a _____ had presented a Certificate of Registration in the name of _____ issued by the C.P. & S. of Manitoba on December 22, 1919. The College records showed that _____ had been registered in 1919, but he had died about 1946. It was concluded that the user had perpetrated a fraud, he was removed from the service, and a bar against further employment was placed against his name.

6. Request for Change of Name

The Registrar advised that Dr. Mary Webb Rait wished to have her name changed on the records of the College to her married name, McKenty. A copy of the Certificate of Marriage under date of January 3, 1942, was presented.

Motion: "THAT the name of Mary Webb Rait be changed to Mary Webb Rait McKenty on the records of the College of Physicians and Surgeons of Manitoba." Carried.

7. Complaint Re Dr. . . .

The Registrar presented correspondence in connection with a complaint that Dr. _____ was negligent in the handling of a case, causing the patient's parents extra worry and expense. The complainant maintained that Dr. _____ should reimburse her for additional expenses incurred.

Motion: "THAT Mrs. _____ be informed that after investigation of her complaint, there does not appear to be any evidence of negligence on the part of Dr. _____." Carried.

The Registrar also presented correspondence from the Canadian Medical Protective Association, advising that Winnipeg is going through a phase where one or two successful claims have been made against members of the medical profession, and other dissatisfied patients are taking action. It was suggested that a meeting of the local Medical Society be held to consider medico-legal problems.

8. Complaint Re . . .

Communication was read from Mr. _____ advising that his wife, a patient of the _____ had been admitted to hospital and operated on by a doctor not connected with the clinic. He stated he had paid the surgeon's bill, and also a bill from the _____ which included "admission to hospital" and "operation," which he considered an overcharge.



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(5 years later)



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REPORT NO. 3

UTILIZATION OF NUTRIENTS BY PREMATURE INFANTS

These studies were designed to compare the utilization by premature infants of the nutrients in milk, meat-supplemented milk and milk-substitute diets. The balance method is being used to determine the utilization of calcium, phosphorus, iron, fat and nitrogen.

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...first to develop and clinically test 100% Meats for Babies

Before referring this matter to the Taxing Committee, the Registrar was requested to secure further information from all parties concerned, to ascertain whether there had been a misunderstanding, and refer back to the Executive Committee.

9. Request for Duplicate Certificate of Registration — Dr. S. Bardal

An affidavit was presented from Dr. Bardal that "All contents of my office were totally destroyed by fire February 6th, 1949, including my Certificate of Registration issued by the College of Physicians and Surgeons of Manitoba, December 3, 1917." Dr. Bardal requested a duplicate certificate and enclosed the fee of Five Dollars (\$5.00).

Motion: "THAT a duplicate Certificate of Registration be issued to Dr. Sigurgeir Bardal, to replace the original lost by fire, February 6, 1949." Carried.

10. Reciprocity with the State Board of Michigan

The Registrar reported that he had word of two Canadian doctors, one a graduate of Manitoba and one a graduate of McGill, who were employed by the University of Ann Arbor Michigan. A regulation of the State Board requires that all medical people outside of the United States who wish to practise in that State, must take the university final year studies besides passing state licensing examinations. The question arose whether Canada would be included in the regulation. Dr. Macfarland explained that Manitoba accepts graduates of United States Class A medical schools, who meet the requirements of the Basic Sciences Act and 12 months internship, to write the examinations of the Medical Council of Canada. The State Board of Michigan advised that the rules and regulations of the State Board could only be changed by the Michigan Legislature, and a proposal that graduates of Class A Canadian medical schools, who meet the requirements of the Board, be admitted to write the Board examinations, was not approved due to the fact that Manitoba and Prince Edward Island were the only two provincial Canadian boards who definitely committed themselves that they were interested in considering such an agreement. The suggestion will be presented to the Michigan Board again in June.

11. University of Manitoba Committee Studying Foreign Credentials

The Registrar advised that Dr. L. G. Bell, Dean of the Faculty of Medicine, had informed him that there was a committee under Dr. A. T. Mathers to deal with documents for advanced standing, as well as the Senate Committee in connection with the Basic Sciences Act, and suggestion was made that this Committee might be of assistance

to the Registration Committee of the C.P. & S. The Executive Committee considered that the University committees would be of great assistance in evaluating the documents of applicants from European universities.

12. Date of May Council Meeting

The date of the Special Council Meeting usually held in May, was set for Convocation Day, May 23, 1950.

Registration Committee

March 12, 1950

Enabling Certificates Granted

Adolf Wasilewski, M.D., U. Warsaw, 1925.

Franz Kozin, M.D., Graz U., 1934.

Elizabeth Cziller, M.D. "Elizabeth" Royal Hungarian U., 1926.

Enabling Certificates Deferred

Anna Czubaty, M.D., U. Posnan and Carl U., 1934.

Wolodymyr Czubaty, M.D., Carl U., 1929 and Posnan U., 1931.

Registration Committee

March 31, 1950

Enabling Certificates Confirmed

Joen Tche Lou, M.D., l'Aurore U., 1933.

Enabling Certificates Granted

Bjorn Jonsson, M.D., U. Iceland, 1947.

James Hermann Nelson, M.D., C.M.E., 1947; D.N.B., 1948.

Michael Moritz Lenczner, M.D., Bologna U., 1932.

Certificates of Registration Granted

Lucas Kulczycki, B.Sc., 1934, D. Bac., 1936, U. Lwow; M.B., Ch.B., Polish School of Medicine, Edin., 1944; D. P. H. Lond. M.D., Polish School of Medicine, Edin., 1946-1948.

Albert William Harold Challis, M.R.C.S., Eng., 1942; L.R.C.P., Lond., 1942; M.B., B.S., U. Lond., 1947.

Geoffrey Bertrand Leyton, M.R.C.S., Eng., 1938; L.R.C.P., Lond., 1938; M.B., B. Chir., U. Camb., 1938; M.D., U. Camb., 1946; D.C.P., U. Lond., 1947.

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p. 239 in:

CARDIOLOGY, by William Evans, M.D.,
D.Sc., F.R.C.P., London, England, published
in 1948 by Paul B. Hoeber, London, New York.

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